

595.7809773  
G543m

UNIVERSITY OF ILLINOIS - URBANA



N30112017635217A



UNIVERSITY OF  
ILLINOIS LIBRARY  
AT URBANA-CHAMPAIGN  
OAK STREET  
LIBRARY FACILITY

**NOTICE:** Return or renew all Library Materials! The *Minimum Fee* for each Lost Book is \$50.00.

The person charging this material is responsible for its return to the library from which it was withdrawn on or before the **Latest Date** stamped below.

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.  
To renew call Telephone Center, 333-8400


UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

AUG 09 1996

MAY 16 2014

L161—O-1096

UNIVERSITY OF  
ILLINOIS LIBRARY  
AT URBANA-CHAMPAIGN  
NATURAL HIST. SURVEY



Digitized by the Internet Archive  
in 2021 with funding from  
University of Illinois Urbana-Champaign



7809773

Natural History Survey  
Library

m

# Microlepidoptera from the Sandy Creek and Illinois River Region

George L. Godfrey  
Everett D. Cashatt  
Murray O. Glenn





Natural History Survey.  
Library.

UNIVERSITY OF  
ILLINOIS LIBRARY  
AT URBANA-CHAMPAIGN  
NAT. HIST. SURV.

**Microlepidoptera**  
**from the Sandy Creek and Illinois River Region:**

An Annotated Checklist  
of the Suborders Dacnonypha, Monotrysia,  
and Ditrysia (in part) (Insecta)

George L. Godfrey, Everett D. Cashatt, and Murray O. Glenn

Illinois Natural History Survey  
Special Publication 7  
July 1987



Illinois Natural History Survey  
A Division of the Department of Energy and Natural Resources

Printed by authority of the State of Illinois

Illinois Natural History Survey  
172 Natural Resources Building  
607 East Peabody Drive  
Champaign, Illinois 61820

The silhouette on the cover was made from a photograph of *Oidaematophorus glenni* Cashatt.  
Cover design: Molly Hardin Scott

NP-8-1.2M-7-87  
ISSN 0888-9546

Manuscripts of high quality dealing with any aspect of natural history will be considered for publication in one of the Illinois Natural History Survey series: *Bulletin*, *Biological Notes*, *Circular*, and *Special Publication*. Authors who are not employees of the Survey are required to pay printing costs. Manuscripts should follow the recommendations of the third edition of the *Council of Biology Editors Style Manual* except that journal names in the literature cited are to be spelled in full. The Survey expects to publish only one or two manuscripts by non-Survey authors yearly.

Send three copies of manuscripts to be considered for publication to Office of the Chief, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, Illinois 61820.

Citation:

Godfrey, G.L., E.D. Cashatt, and M.O. Glenn. 1987. Microlepidoptera from the Sandy Creek and Illinois River Region: an annotated checklist of the suborders Dacnonypha, Monotrysis, and Ditrysis (in part) (Insecta). Illinois Natural History Survey Special Publication 7. 44p.



595.7809773

Nat. Hist. Surv.

G 543 mv

## Contents

Collection Area.....	1	18. Heliozelidae.....	16
Collecting Techniques.....	4	19. Incurvariidae.....	17
Structure of the Checklist.....	4	20. Limacodidae.....	17
Acknowledgments.....	5	21. Lyonetiidae.....	17
Checklist		22. Momphidae.....	17
1. Acrolepiidae.....	7	23. Nepticulidae.....	18
2. Agonoxenidae.....	7	24. Oecophoridae.....	18
3. Argyresthiidae.....	7	25. Opostegidae.....	19
4. Blastobasidae.....	7	26. Plutellidae.....	19
5. Carposinidae.....	7	27. Psychidae.....	19
6. Choreutidae.....	7	28. Pterophoridae.....	19
7. Cochylidae.....	7	29. Pyralidae.....	20
8. Coleophoridae.....	8	30. Scythrididae.....	27
9. Cosmopterigidae.....	9	31. Sesiidae.....	27
10. Cossidae.....	10	32. Thyrididae.....	28
11. Elachistidae.....	10	33. Tineidae.....	28
12. Epermeniidae.....	10	34. Tischeriidae.....	29
13. Eriocraniidae.....	10	35. Tortricidae.....	30
14. Gelechiidae.....	10	36. Yponomeutidae.....	37
15. Glyphipterigidae.....	14	37. Zygaenidae.....	37
16. Gracillariidae.....	14	Index of Larval Hosts.....	38
17. Heliodinidae.....	16	Literature Cited.....	44



Murray O. Glenn (October 3, 1893–July 26, 1981) reminisces about his collecting experiences in his study at his home in Henry, Illinois, on the day his moth collection was transported to the Illinois Natural History Survey, March 21, 1977.



THIS paper reports the faunal, phenological, and host plant data associated with a collection of about 30,000 microlepidoptera representing 954 species. Collected by the late Murray O. Glenn between 1927 and 1976 in Marshall and Putnam counties, Illinois, and donated to the Illinois Natural History Survey in 1977, this collection may represent the most complete and significant assemblage of midwestern microlepidoptera in existence (Godfrey 1978). It is rivaled perhaps only by that of the late Annette F. Braun, Cincinnati, Ohio, a collection that now resides in The Academy of Natural Sciences of Philadelphia, Pennsylvania (R.W. Hodges, pers. comm.), except for a synoptic set of specimens given to the University of Louisville (C.V. Covell, Jr., pers. comm.). A substantial amount of Glenn material is also preserved in the United States National Museum of Natural History at the Smithsonian Institution. Glenn's persistent collecting activities, coupled with his careful labeling and preparation techniques, resulted in valuable data that have application to current and future ecological and systematic research and to inventorying natural resources of Illinois. This information, therefore, is made available here to aid investigators in these and related disciplines.

The meaning of the term "microlepidoptera" is based more on traditional usage than on biological meaning. Various authors, including Forbes (1923) and McDunnough (1939), employed the term almost casually as a category for certain lepidopterous superfamilies that, with some exceptions, characteristically include moths with wingspans of about 5–25

mm as opposed to macrolepidoptera, a category composed principally of larger species. It was within this traditional framework that Glenn pursued his interests. More recent treatments of the higher classification of the Lepidoptera cited and followed by Hodges et al. (1983) place no significance on the terms microlepidoptera and macrolepidoptera but emphasize instead the subordinal taxa of Zeugloptera, Dacnonypha, Exoporia, Monotrysis, and Ditrysis. Thus, references to microlepidoptera in this report apply to the Dacnonypha and the Monotrysis and to the smaller Ditrysis. (Glenn collected no representatives of Zeugloptera or Exoporia.)

Many microlepidoptera are concealed feeders and exhibit a variety of feeding habits, including leaf mining, tying, and rolling; gall making; and stem, root, and wood boring. Certain species feed on or in fruiting structures; others feed on dead plant or animal matter. Some of the economically important species in the present paper include *Sitotroga cerealella* (Olivier) (Angoumois grain moth) (Gelechiidae); *Depressaria pastinacella* (Duponchel) (parsnip webworm) (Oecophoridae); *Thyridopteryx ephemeraeformis* (Haworth) (evergreen bagworm) (Psychidae); *Synanthedon exitiosa* (Say) (peach tree borer) (Sesiidae); *Tinea pelionella* Linnaeus (casemaking clothes moth) and *Tineola bisselliella* (Hummel) (webbing clothes moth) (Tineidae); *Choristoneura fumiferana* (Clemens) (spruce budworm) and *Cydia pomonella* (Linnaeus) (codling moth) (Tortricidae); and *Anagasta kuehniella* (Zeller) (Mediterranean flour moth), *Crambus agitatellus* Clemens (grass webworm), *Ostrinia nubilalis* (Hübner) (European corn borer), *Plodia interpunctella* (Hübner) (Indian meal moth), and *Pyrallis farinalis* Linnaeus (meal moth) (Pyralidae).

### Collection Area

Based on his specimen labels, Glenn simply designated the collecting locality as "Putnam Co." Actually, the geographical area (Figure 1) in which he concentrated his activities is delimited southward by Sandy Creek from Magnolia (sec. 35, T. 31 N., R. 1 W., Magnolia Twp., Putnam Co.) to the Illinois River (11.4 km) and extends about 6.5 km northward to a swamp (W½ sec. 23, T. 31 N., R. 2 W., Magnolia Twp., Putnam Co.) through which Clear Creek flows above

---

Dr. G.L. Godfrey is an Associate Insect Taxonomist, Illinois Natural History Survey, Champaign, and Dr. E.D. Cashatt is an Associate Curator of Zoology, Illinois State Museum, Springfield. Mr. M.O. Glenn was a farmer who lived in Putnam County, Illinois. Glenn began collaborating in the writing of this publication, but unfortunately he died on July 26, 1981. Consequently, the responsibility for interpreting the data in his collection and completing the manuscript was entirely assumed by the first two authors. Because of the importance of Glenn's prior efforts, however, he is considered to be one of the authors. Direct references to him and to his contributions are intentional and will help the reader ascertain and appreciate those contributions. Irwin's (1983) obituary of Glenn may be consulted for details about Glenn's avocation and life.

Sawmill Lake and to the County School (NW¼SW¼ sec. 15, T. 31 N., R. 1 W., Magnolia Twp., Putnam Co.). The town of Henry, located immediately west of the Illinois River, also is included in this report because Glenn lived there after retiring from farming in 1951 and collected around his home (NE¼NW¼SW¼ sec. 16, T. 13 N., R. 10 E., Henry Twp., Marshall Co.) when conditions did not permit him to venture east. This defined area encompasses parts of Marshall and Putnam counties. Glenn's farmhouse was situated in Putnam County (SE¼NE¼ sec. 31, T. 31 N., R. 1 W., Magnolia Twp.) about midway between Magnolia and Henry, but his farmland, especially the most wooded parts of it (Figures 2, 3, and 4), overlapped into adjacent Marshall County. Thus, even on his own property, he worked both counties and took advantage of the area's diverse habitats, including wooded hollows, stream margins, prairie patches, and manmade disturbances, especially farmland and the abandoned Rutland, Toluca, and Northern Railroad right-of-way (Figure 5).

The collection area falls within two of the natural divisions of Illinois recognized by Schwegman et. al (1973): the Illinois River Section of the Upper Mississippi River and Illinois River Division and the Grand Prairie Section of the Grand Prairie Division. The suturing of the area's prairie (albeit remnant), deciduous woodland (increasingly remnant), and riparian ecosystems and their combined plant communities (see Index of Larval Hosts for a partial list of the area's plant species) may help to account for the large number of species of microlepidoptera in the area. Also of importance is the small rise in elevation from Sandy Creek and the Illinois River to the former prairie area north and east of these streams. The lowest point is 134 m (normal pool level of the Illinois River) and the highest is 212 m at a point 5.9 km east of the Illinois River. At numerous points along the hills bordering Sandy Creek and the Illinois River, however, the elevation may rise from 137 to 198 m within 0.6 km. These are the sites of wooded hollows with either intermittent or permanent streams.

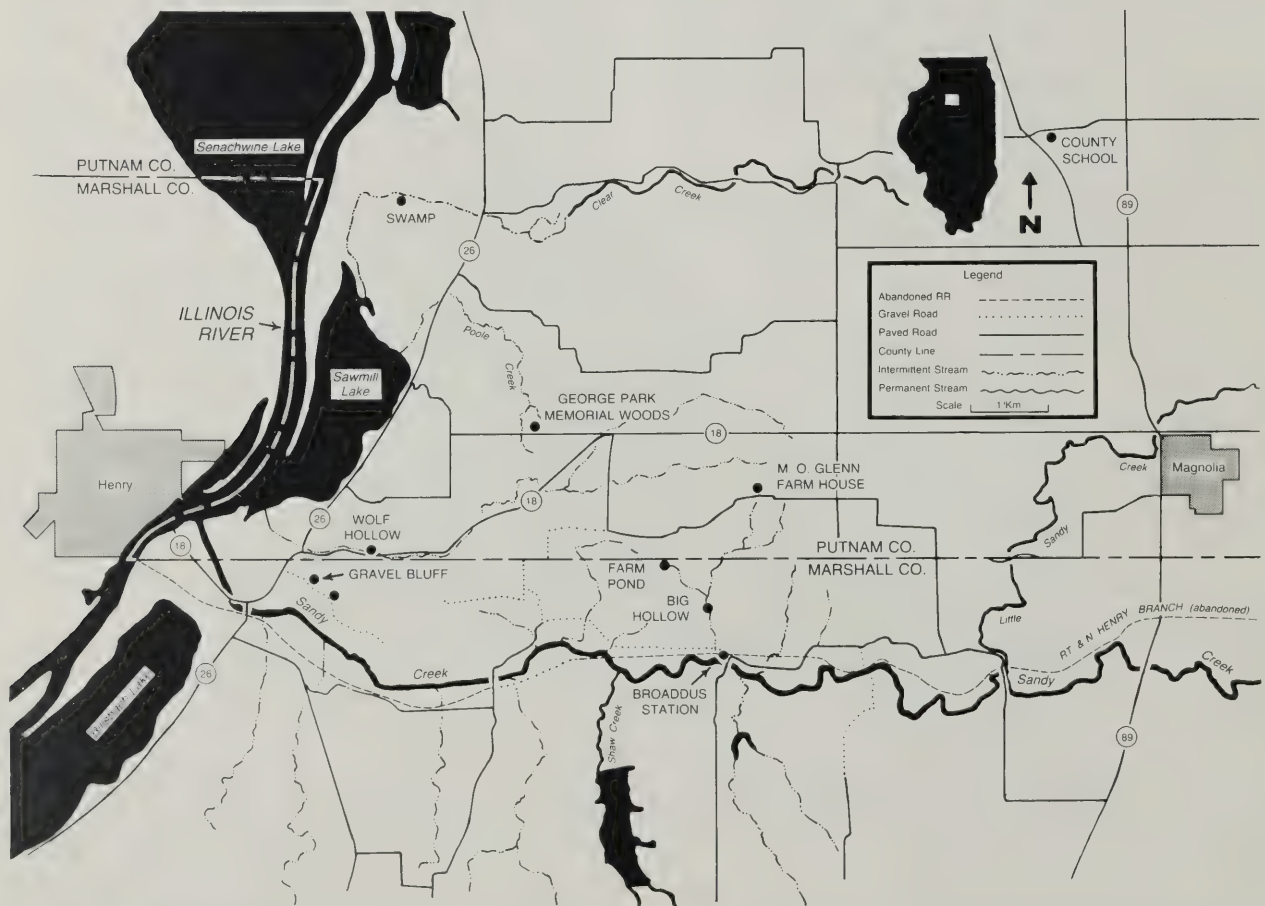


FIGURE 1. Collection area in the vicinity of the Illinois River and Sandy Creek, Putnam and Marshall counties. The insert shows the location of the collection area within Illinois.



Glenn collected 15 previously undescribed species, which have subsequently been described by other workers (Clarke 1941, 1947, 1953; Hodges 1962a, 1962b, 1964, 1966, 1969, 1986; Cashatt 1972). These are shown in Figure 6. Because "Putnam Co." is the type-locality for each of these species, we attempted to define more precisely his principal collecting sites. Three sites were determined on and adjacent to his farm: Big Hollow ( $E\frac{1}{2}NW\frac{1}{4}$  sec. 6, T. 30 N., R. 1 W., Roberts Twp., Marshall Co.), the farm pond ( $NE\frac{1}{4}NW\frac{1}{4}NW\frac{1}{4}$  sec. 6, T. 30 N., R. 1 W., Roberts Twp., Marshall Co.), and a short segment of the abandoned Henry Branch of the now defunct Rutland, Toluca, and Northern Railroad immediately west of Broadus Station (intersection of Marshall County roads 1170N and 1960E) near Sandy Creek ( $NW\frac{1}{4}NW\frac{1}{4}SE\frac{1}{4}$  sec. 6, T. 30 N., R. 1 W., Roberts Twp., Marshall Co.). Abandonment of the railroad occurred about 1919 (Irwin 1985). Collecting sites identified within the southwestern part of the area

are the lower portion of Wolf Hollow east of the north junction of State highways 18 and 26 (formerly 87) ( $SE\frac{1}{4}$  sec. 34, T. 31 N., R. 2 W., Magnolia Twp., Putnam Co.) and a site on an unpaved road ( $E\frac{1}{2}NW\frac{1}{4}$  sec. 3, T. 30 N., R. 2 W., Hopewell Twp., Marshall Co.) just southeast of a gravelly bluff ( $N\frac{1}{2}NW\frac{1}{4}$  sec. 3, T. 30 N., R. 2 W., Hopewell Twp., Marshall Co.) about 0.5 km south of the same junction. The gravelly bluff may be the site that Glenn mentioned to Wyatt (Wyatt 1953). Northward, George Park Memorial Woods near the upper reaches of Poole Creek ( $W\frac{1}{2}SW\frac{1}{4}$  sec. 25, T. 31N., R. 2 W., Magnolia Twp., Putnam Co.) and the swampy area along the lower end of Clear Creek in the Illinois River Valley (3.2 km NE and 4.2 km NNE, respectively, from the aforementioned highway intersection) are important. Information on these collecting areas, all shown in Figure 1, came from Glenn's family members, his colleagues, and Glenn himself.

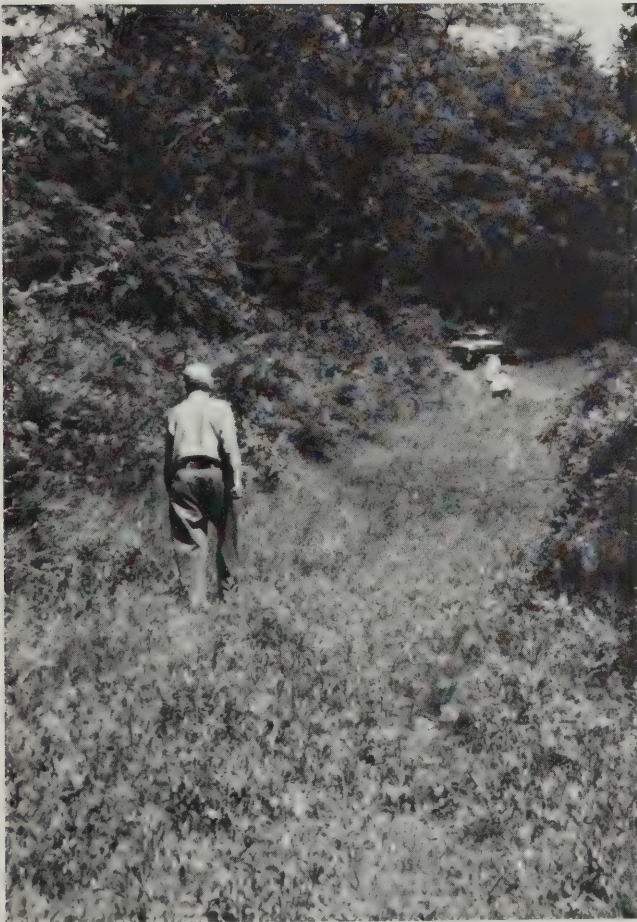


FIGURE 2. Murray O. Glenn (foreground) in an abandoned pasture with encroaching woody vegetation adjacent to the north end of Big Hollow.



FIGURE 3. Bluff at the northern end of Big Hollow overlooking Sandy Creek Valley.



### Collecting Techniques

Glenn built his collection from moths captured at night or during the day and from moths reared from caterpillars and pupae found in the field. The curiosity about plant-caterpillar-moth associations that led him into his 50-year avocation developed during the Great Depression when he, in his own words, "didn't have anything to do." He began collecting moths at lighted surfaces (especially collecting sheets and windows) during the evening and moths that he spotted and chased during the day to supplement his series. Until the late 1950s he used pressurized gas lamps at night to attract moths to his portable collecting sheet; subsequently, he switched to a 15-watt fluorescent, ultraviolet lamp. With few exceptions, the specimen labels do not indicate where within the collecting area ("Putnam Co.") specimens were taken or the hour of their capture.



FIGURE 4. East view across Big Hollow.

### Structure of the Checklist

Although Glenn followed McDunnough's checklist (1939), the zoological nomenclature used here has been adjusted to accord to Hodges et al. (1983) and to certain additional papers (Brown and Miller 1983; Miller 1983a, 1983b, 1985a, 1985b, 1987; Hodges 1986). Names at each hierarchical level (family, genus, and species), however, have been alphabetized as an aid to nonspecialists rather than listed in the "phylogenetic"-numerical sequence followed by Hodges et al.

Within species accounts, information is divided into two categories: data pertaining to field-collected moths and data pertaining to reared moths. Readers may assume that dates without other notations indicate when moths were collected in the field. Dates for reared specimens are those when moths issued from the pupal stage.

Because Glenn gave numerous specimens to individuals and to institutions during his many years of collection, we are unable to indicate the relative abundance of a given species on any particular date. We have, therefore, intentionally omitted the number of specimens per species collected or reared on a particular date. When, however, a species was collected on the same day of the month in different years, we have included the years parenthetically because that information may be useful in establishing seasonal flight peaks. Neither time nor resources permitted us to determine all the recipients of Glenn's material and to include that data in this account.

Host information often helps to identify microlepidoptera (Forbes 1923; MacKay 1959, 1962, 1968; Neunzig 1972) and to understand their systematic relationships (Clarke 1952; Powell 1980); therefore, all such data from Glenn's rearings are included. Glenn used common and scientific names for host plants but neither with consistency. Therefore, if he used only a vernacular name, we have listed it first, followed by the scientific name in brackets. When the genus or genus and species are listed first, readers may assume that this information was recorded by Glenn. Fernald's (1950) nomenclature was used for the formal names of host plants.

Users of the checklist should note that it is not necessarily a complete accounting of all microlepidoptera that may occur in Marshall and Putnam counties. Additional rearings and such collecting techniques as the use of pheromone traps for the Sesiidae and mercury vapor lamps undoubtedly would yield species that Glenn missed. R.W. Hodges (pers. comm.) stated that undescribed species are among the more than 10,000 unidentified specimens that Glenn gave to the United States National Museum of Natural History in 1977.



### Acknowledgments

The family of Murray O. Glenn—especially Marjorie E. Haws, Magnolia, Illinois, and Donald Glenn, McNabb, Illinois—graciously provided information on his collecting activities and warmly hosted us on our visits to the Glenn farm. Another important source, historically and personally, was Roderick R. Irwin, Research Affiliate at the Illinois Natural History Survey (INHS) and Honorary Curator of Lepidoptera, Illinois State Museum (ISM), who received his early tutoring in lepidopterology from M.O. Glenn. J.F. Gates Clarke and Donald R. Davis of the United States National Museum of Natural History (USNM) and August Busck (deceased), Carl Heinrich (deceased), and Ronald W. Hodges of the United States Department of Agriculture (USDA) were the principal specialists who aided Glenn during the most active years of the collection's development.

Several colleagues, including Richard L. Brown, Mississippi State University; D.R. Davis, USNM; R.W. Hodges, Systematic Entomology Laboratory (USDA); Jean-François Landry, Biosystematics Research Centre, Agriculture Canada; William E. Miller, University of Minnesota; Herbert H. Neunzig, North Carolina State

University; and Jerry A. Powell, University of California (Berkeley), aided us by correcting certain species identifications and/or advising us on portions of various drafts of the manuscript and on nomenclatorial problems. Steven Passoa, University of Illinois at Urbana-Champaign, brought additional problems requiring corrections to our attention and Charles V. Covell, Jr., University of Louisville, kindly provided clarifying information. James E. King (ISM), Kenneth R. Robertson (INHS), and David J. Voegtlin (INHS) reviewed the manuscript and offered constructive comments during its final phase.

We thank Molly Hardin Scott (INHS) and Marlin Roose (ISM) for their photographic assistance and Lloyd Le Mere, Gail Herendeen, and John Sherrod (INHS) for help with the illustrations. Mary Lou Williamson's patience and wordprocessing skills are much appreciated as are the editorial efforts of the Office of Communication (INHS), especially those of Audrey S. Hodgins. Finally, we are indebted to J.F.G. Clarke and W.E. Miller for carefully reviewing the entire checklist at the request of the INHS Publication Committee. Their suggestions greatly helped us prepare our final draft.



FIGURE 5. Everett D. Cashatt and Donald Glenn examining part of the abandoned Rutland, Toluca, and Northern Railroad right-of-way near Broadus Station, adjacent to Sandy Creek.



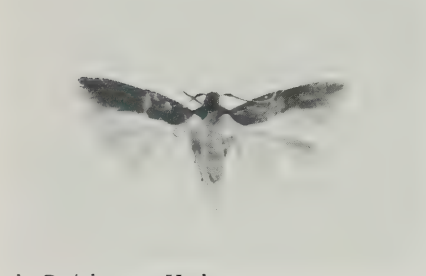
a. *Batrachedra illusor* Hodges  
Coleophoridae (4.0x)



b. *Chedra inquisitor* Hodges  
Coleophoridae (2.7x)



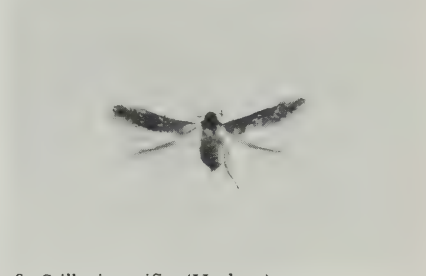
c. *Perimede maniola* Hodges  
Cosmopterigidae (3.7x)



d. *Periploca cata* Hodges  
Cosmopterigidae, Paratype (3.7x)



e. *Sorhagenia baucidis* Hodges  
Cosmopterigidae, Paratype (3.7x)



f. *Stilbosis venifica* (Hodges)  
Cosmopterigidae (3.7x)



g. *Teladoma incana* Hodges  
Cosmopterigidae (3.7x)



h. *Dichomeris caia* Hodges  
Gelechiidae (3.7x)



i. *Dichomeris glenni* Clarke  
Gelechiidae (2.5x)



j. *Agonopterix dimorphella* Clarke  
Oecophoridae, Paratype (2.7x)



k. *Oidaematophorus glenni* Cashatt  
Pterophoridae, Paratype (1.7x)



l. *Endopiza sambuci* (Clarke)  
Tortricidae, Paratype (3.7x)



m. *Endothenia microptera* Clarke  
Tortricidae (3.7x)



n. *Eucosma uta* Clarke  
Tortricidae (2.7x)



o. *Olethreutes comandrana* (Clarke)  
Tortricidae, Paratype (2.7x)

FIGURE 6. Lepidoptera representative of those collected by Murray O. Glenn in Putnam and Marshall counties and subsequently described from "Putnam Co." by other lepidopterists. (Figure 6.a, courtesy of R. W. Hodges, Systematic Entomology Laboratory, USDA.)



# Checklist

## 1. ACROLEPIIDAE

### *ACROLEPIOPSIS* Gaedike

*A. incertella* (Chambers): March 29; April 5, 20, 23, 25(1962, 1966), 26(1949, 1970); May 2, 6(1966, 1975); June 19, 21, 23, 25, 28; July 15; August 7; October 1.

## 2. AGONOXENIDAE

### *BLASTODACNA* Wocke

*B. bicristatella* (Chambers): May 9, 16(1963, 1971), 17, 19, 20, 26, 27; June 1, 2(1940, 1966), 3, 6(1944, 1956), 7.

## 3. ARGYRESTHIIDAE

### *ARGYRESTHIA* Hübner

*A. austerella* Zeller: May 14, 24, 30(1957, 1961); June 3(1963, 1965), 7, 12, 13, 16(1948, 1962), 17, 19(1948, 1965), 24.

*A. calliphanes* Meyrick: July 26, 29(1964, 1967), 31; August 2, 8, 10, 13.

*A. oreasella* Clemens: June 9–12, 14(1967, 1968, 1976), 15, 18(1944, 1968, 1975), 19, 21(1951, 1975), 22, 24(1966, 1967), 25, 28(1942, 1968), 30(1960, 1969); July 6, 8, 16, 18.

## 4. BLASTOBASIDAE

### *GERDANA* Busck

*G. caritella* Busck: June 3, 6, 10(1966, 1970), 15, 20, 23, 24, 30(1957, 1964); July 1, 2, 22, 24, 28, 30; August 2, 6, 9, 15, 25; September 8, 10, 13, 20.

### *HOLCOCERA* Clemens

*H. chalcfrontella* Clemens: May 6, 16, 20; June 8, 9(1956, 1960), 15, 22(1961, 1966), 28; July 2, 8, 16. Reared: *Rhus* sp. (sumac) (heads); issued May 3, 7.

*H. elyella* Dietz: July 13.

### *OEGOCONIA* Stainton

*O. quadripuncta* (Haworth): June 15, 22, 23; July 6, 10(1959, 1960), 11, 14, 17(1961, 1966), 22, 23, 25, 31; August 4, 16.

### *SCEPTEA* Walsingham

*S. aequapulvella* (Chambers): June 3, 9, 18; August 5, 9, 10(1961, 1963), 11, 13, 15, 16, 21, 22, 24(1943, 1963), 28, 29; September 5.

### *VALENTINIA* Walsingham

*V. glandulella* (Riley): May 31; June 9, 16, 25, 28; July 8, 11, 16, 29; August 11, 26. Reared: *Carya* sp. (hickory) (larva in *Curculio*-eaten hickory nut); issued February 25 (forced indoors).

## 5. CARPOSINIDAE

### *CARPOSINA* Herrich-Schäffer

*C. fernaldana* Busck: June 7, 13; August 16, 23–25, 29; September 9.

*C. niponensis ottawana* Kearfott: June 7, 13, 16, 19, 27; July 19, 23, 29; August 15, 16, 21, 27, 29(1964, 1967, 1969); September 6, 9, 14.

### *BONDIA* Newman

*B. crescentella* (Walsingham): April 12, 20–25, 26(1949, 1963), 28; May 4, 5, 7, 26.

## 6. CHOREUTIDAE

### *BRENTHIA* Clemens

*B. pavonacella* Clemens: May 15; June 2, 5, 8, 18; July 19, 22, 23, 25, 26, 31; August 1, 5, 6. Reared: *Amphicarpa bracteata* (L.) Fern. [labeled "*Amphicarpa monoica*"]; issued October 24. *Desmodium* sp.; issued November 4; May 22 (overwintered as pupae [2 specimens]).

### *PROCHOREUTIS* Diakonoff & Heppner

*P. ochoreutis extrincicella* (Dyar): May 30; June 8.

*P. inflatella* (Clemens): August 14, 19, 24; September 8, 19, 22(1946, 1948). Reared: *Scutellaria lateriflora* L.; issued August 8, 10.

### *TEBENNA* Billberg

*T. carduiella* (Kearfott): June 15, 24. Reared: *Solidago rigida* L.; issued June 14.

*T. gnaphaliella* (Kearfott): September 9.

## 7. COCHYLIDAE

### *CAROLELLA* Busck

*C. bimaculana* (Robinson): July 1; August 27, 29(1942, 1964); September 1, 5, 9, 20.

### *HYSTEROSIA* Stephens

*H. baracana* Busck: July 15, 26, 28; August 3, 5–7, 12, 17, 18, 20, 23, 25.

*H. birdana* Busck: August 10, 15, 26. Reared: *Rudbeckia laciniata* L. (root borer); issued July 26, 29, 31; August 2.

*H. modestana* Busck: July 15, 29, 30; August 7(1948, 1963), 12(1948, 1961), 13, 15(1944, 1968), 17(1940, 1964), 20, 23, 26(1961, 1969), 31; September 2.

*H. terminana* Busck: August 3, 19(1959, 1962), 24, 25; September 2, 5, 9. Reared: *Verbesina alternifolia* (L.) DC. [labeled "*Actinomeris alternifolia*"] (root borer); issued July 22, 26, 29, 30; August 10, 17.

#### INCERTAE SEDIS

*H. angulatana* Robinson: May 22, 27, 30; June 10, 20, 24, 30; July 1, 6, 9, 19, 28, 29, 31; August 4–6, 9, 11, 13, 14; September 12, 19.

*H. argentilimitana* Robinson: May 11, 15, 20, 24–27, 29, 30, 31(1944, 1955); June 6, 9, 10, 18(1952, 1973), 24(1956, 1963), 27; July 8–10, 17, 19, 23, 24, 30; August 2, 12, 14, 15, 18, 19, 29; September 18(1947, 1949), 23.

*H. atomosana* Busck: August 19, 22.

*H. augustana* Clemens: May 25, 29, 31; June 20, 22, 26, 29; July 2, 7, 11, 20, 24; August 1, 4, 10, 12(1946, 1949), 14, 16(1942, 1966), 18, 21, 27; September 1, 3, 9, 10, 13, 16.

*H. aureana* Busck: June 11; July 28, 29.

*H. biscana* Kearfott: May 20; June 4, 5, 9, 10, 12, 17, 20; August 4, 9(1940, 1945), 12, 13, 22, 28–30; September 3, 7–9, 17, 27.

*H. discana* Kearfott: August 3, 4, 6, 7(1968, 1970), 10, 12, 13, 14(1967, 1972), 15, 17, 18, 19(1949, 1966, 1968), 20, 21, 23(1962, 1963), 26, 27, 29, 30.

*H. flaccosana* Walker: May 24; June 5, 6(1963, 1975), 12.

*H. hospes* Walsingham: July 14, 22, 23(1970, 1972), 24, 28–30; August 3, 6(1953, 1975), 8, 13(1954, 1966, 1970), 15, 20, 21, 27, 30.

*H. interruptofasciana* Robinson: June 19, 20, 22, 24, 28, 30; July 15(1944, 1964), 19(1948, 1949), 22–24, 26, 31; August 11, 16; September 3.

*H. lavana* Busck: May 30; June 16, 18–21, 28, 30; July 1, 8. Reared: *Penstemon* sp. (in seed pods); issued June 14–16, 19, 30; July 1, 8; overwintered as larvae in seed pods.

*H. leguminana* Busck: April 24, 26, 29; May 3–5, 8, 11, 12, 13(1961, 1967), 21; June 13, 18(1939, 1963), 19, 23–25, 28(1960, 1968), 29, 30; July 3, 4, 10–12, 16(1963, 1965), 26; August 7, 24, 29.

*H. louisiana* Busck: May 29; June 3, 5, 8(1946, 1949), 11(1944, 1949), 24.

*H. marloffiana* Busck: May 4, 8, 10, 16, 22(1957, 1964); June 2, 4–6, 9, 13, 17, 20; July 7, 12; August 26, 28; September 3.

*H. oenotherana* Riley: June 16, 22, 27; July 26, 31; August 20; September 17. Reared: *Oenothera* sp. (terminal leaves); issued June 12, 14; August 8, 11.

*H. promptana* Robinson: May 23–26, 30, 31(1955, 1956); June 6, 8, 10, 16–18, 20, 24; July 24.

*H. punctadiscana* Kearfott: May 23; June 7; July 12, 17, 21, 24, 28(1962, 1974), 30; August 1, 6(1964, 1975), 7, 8, 11–13, 14(1966, 1967), 15(1967, 1974), 17, 18, 22, 23.

*H. rana* Busck (?): August 10.

*H. spartinana* Barnes & McDunnough: July 15, 23–25, 27; September 4.

*H. tenerana* Busck: April 21, 28, 30; May 2(1968, 1969), 4(1964, 1969), 10(1949, 1975), 11, 14, 16(1964, 1975), 19, 21, 30.

*H. viscana* Kearfott: Reared: *Chelone glabra* L., turtlehead (flowers and seeds); issued June 27, 28, 30; July 4, 6, 7, 10, 11, 16, 17(1951, 1961), 18, 19, 22(1951, 1961), 24, 27(1951, 1961), 28(1951, 1961), 29; August 1–3, 5, 7.

*H. zaracana* Kearfott: May 29(1950, 1975), 30, 31; June 1, 30; July 1, 2, 4, 11, 12, 19, 20, 22, 23.

#### THYRAYLIA Walsingham

*T. bunteana* (Robinson): June 27; July 12(1944, 1965), 14, 24, 30; August 1, 2, 6(1966, 1968), 11, 14, 15, 17(1964, 1969), 21(1972, 1976), 26; September 3, 6, 7, 21. Reared: *Sium suave* Walt. [labeled "*Sium cicutaefolium*"]; issued August 29.

## 8. COLEOPHORIDAE

#### BATRACHEDRA Herrich-Schäffer

*B. curvilineella* (Chambers): May 9, 14, 15(1962, 1964), 19, 20, 24, 30; June 1, 2, 6(1948, 1956), 7, 17, 18, 21, 24, 25; July 17, 19, 21; August 5, 7, 15, 16 (trunk of cottonwood [*Populus* sp.]), 18, 22.

*B. illusor* Hodges (Figure 6.a): [June 26 (holotype, USNM; Hodges 1966)]. Host: Dead willow (*Salix* sp.) stems (Contra Costa County, California) (Hodges 1966).

*B. praeangusta* (Haworth): September 1, 2, 9, 13(1967, 1968), 14, 16, 18, 20, 25, 30. Host: *Populus tremuloides* Michx. (Hodges 1966).

*B. salicipomonella* Clemens: June 7. Host: Gall of *Pontania hospes* (Walsh) on *Salix* spp. (Hodges 1966).

#### CHEDRA Hodges

*C. inquisitor* Hodges (Figure 6.b): June 2(1962, 1967), 4, 8, 10, 12, 20, 23(1965, 1967), 24, [26 (holotype, USNM; Hodges 1966)], 29(1966, 1967), 30; July 1, 3, 6(1957, 1966), 15, 17, 18, 21(1963, 1965), 22, 23(1957, 1965), 25; August 15.

#### COLEOPHORA Hübner

*C. albovanescens* Heinrich: July 10; August 12. Reared: *Corylus americana* Walt.; issued July 10; August 12.

*C. concolorella* Clemens: June 13, 18, 20. Reared: Hickory [*Carya* sp.] (from case on trunk); issued May 16, 21, 28; June 2.

*C. laticornella* Clemens: June 8, 9, 22, 25(1939, 1960), 29, 30; July 3, 7, 25(1957, 1967), 30. Reared: Hickory [*Carya* sp.] (from larva in case feeding on leaf); issued May 21; June 16, 18, 19, 21.

*C. malivorella* Riley: July 22. Reared: *Prunus serotina* Ehrh.; issued June 25, 30; July 1, 22.

*C. monardella* McDunnough: June 19, 30; July 3. Reared: *Monarda fistulosa* L.; issued June 30; July 5, 11, 30.

*C. polemoniella* Braun: Reared: *Polemonium reptans* L.; issued May 24, 30; June 1, 9, 11, 24, 27. Notes. Three braconids reared ex larval case May 24.

*C. querciella* Clemens: June 7, 15, 17, 18, 22, 28. Reared: *Quercus rubra* L.; issued June 14, 16 (from case on trunk).



*C. sparsipuncta* Heinrich: Reared: *Aster* sp.; issued June 19, 21. *Solidago gigantea* Ait. [labeled "*Solidago serotina*"]; issued June 19, 26–28; July 1, 2, 4, 8; September 1.

*C. spissicornis* (Haworth): May 21(1936, 1956), 25(1941, 1958), 26, 29. Reared: *Veronicastrum virginicum* (L.) Farw. [labeled "*Veronica virginica* L."] (Culver's root); issued June 21, 28.

*C. tiliaefoliella* Clemens: July 6, 29. Reared: *Tilia americana* L.; issued June 15, 19, 29; July 4, 6, 8, 10, 29.

*C. vernoniaeella* Chambers: July 14, 16. Reared: *Vernonia missurica* Raf. [labeled "*Vernonia illinoiensis*"]; issued June 30; July 4, 5(1949, 1953), 9, 13. *Vernonia* sp. (casebearer); July 2, 8, 10, 14.

### DUOSPINA Hodges

*D. trichella* (Busck): June 9.

## 9. COSMOPTERIGIDAE

### CHRYSOPELEIA Chambers

*C. purpuriella* Chambers: May 19, 27; June 1, 3, 4, 6, 7; July 14, 22; August 1, 21.

### COSMOPTERIX Hübner

*C. bendidia* Hodges: May 25; June 11; July 30; August 3, 5, 6(1964, 1965), 7(1966, 1970), 8, 10, 12, 18, 19, 21(1967, 1968), 26, 27; September 17. Host: *Ipomoea* spp. (Hodges 1962b).

*C. clemensella* Stainton: June 4, 14, 16, 18, 20, 24, 28(1942, 1948, 1968); July 5(1964, 1968), 7, 17; August 1, 6(1966, 1967), 12(1968, 1971), 13(1970, 1972), 17, 18(1969, 1972).

*C. fernaldella* Walsingham: August 1.

*C. gemmiferella* Clemens: June 1, 10, 24, 25, 30; July 23; August 5, 23, 28; September 3, 9, 10, 13.

*C. montisella* Chambers: May 25, 30; June 7, 13, 14, 17, 19, 22, 25(1965, 1967); July 7; August 27(1956, 1974); September 6, 8(1963, 1968), 9, 13, 17, 22; October 11.

*C. pulchrimella* Chambers: April 21, 24; May 4, 12, 14, 15, 21, 22, 30; June 9, 10, 13, 16, 23, 27, 30(1957, 1963); July 10, 12, 16, 21(1956, 1962), 30, 31; August 2, 7, 8; September 3.

*C. scirpicola* Hodges: June 8; July 28; August 2.

### EUCLEMENSIA Grote

*E. bassettella* (Clemens): July 16, 22; August 1.

### ITHOME Chambers

*I. concolorella* (Chambers): June 4–7, 9, 10(1965–1967), 11, 18, 23–25, 30(1964, 1966); July 1, 8, 9, 10(1965, 1966), 12, 13.

### LIMNAECIA Stainton

*L. phragmitella* Stainton: June 11, 12, 22, 23, 30(1941, 1960, 1965); July 2, 4, 6, 7(1970, 1976), 10, 12(1947, 1960, 1968), 13, 17, 25; September 29.

### PERIMEDE Chambers

*P. circitor* Hodges: August 2.

*P. erema* Hodges: July 22, 25.

*P. erransella* Chambers: June 1, 3, 4, 7, 9, 10, 14, 18(1963, 1968), 21, 22, 24; July 6, 7, 10, 15(1967, 1968); August 5, 11, 12(1969, 1971), 14(1950, 1967), 15–17, 20(1964, 1968), 22, 29; September 6(1967, 1968), 8, 12, 13, 20.

*P. falcata* Braun: July 1, 7, 14, 15, 17, 19, 20, 22, 27; August 3, 4, 17.

*P. maniola* Hodges (Figure 6.c): July 3, 11; [August 19 (holotype, USNM; Hodges 1969)].

*P. parilis* Hodges: June 6, 7, 16; July 7, 9, 15(1964, 1966, 1968), 22; August 14, 20.

*P. ricina* Hodges: June 28; July 1, 4, 5, 8, 10, 12(1965, 1973), 14, 18–20(1964, 1966, 1974), 26, 28; August 7, 8(1944, 1969), 9, 10(1956, 1962, 1970), 13, 14, 17.

### PERIPLOCA Braun

*P. cata* Hodges (Figure 6.d): May 16; June 6, 20, 25; July 13, 14, 16, 17; August 18. Reared: Cedar [*Juniperus* sp.] apple galls [*Gymnosporangium* sp.] (borers in galls) (overwintered in galls); 36 moths issued indoors from January 22–June 4. Holotype (Cornell University Collection) reared by Hodges (1962a), issued May 30.

*P. gleditschiaeella* (Chambers): May 28; June 1, 6, 7, 9, 11(1968, 1969), 12, 13, 15.

*P. hortatrix* Hodges: May 27(1967, 1969); June 4, 6, 7, 11; July 17; September 1.

*P. laeta* Hodges: June 20, 23, 29; July 3, 5, 9–11(1965, 1970), 14, 19, 31.

*P. orichalcella* (Clemens): July 2, 15, 17(1964, 1965), 22, 23, 25.

### SORHAGENIA Spuler

*S. baucidis* Hodges (Figure 6e): June [17 (holotype, USNM; Hodges 1969)], 30; [July 2 (Hodges 1969)].

*S. pexa* Hodges: July [6 (Hodges 1969)], 8, 10.

### STAGMATOPHORA Herrich-Schäffer

*S. sexnotella* (Chambers): May 4; June 2, 6, 12, 14, 16, 28; August 16, 18.

*S. wyattella* (Barnes & Busck): July 12, 20, 22–25, 27(1959, 1961), 28(1959, 1960, 1965, 1974), 30(1959, 1962), 31(1956, 1964); August 4(1960, 1967–1969), 13, 18.

### STILBOSIS Clemens

*S. ostryaeella* (Chambers): June 7, 21, 24(1964, 1966), 26, 28–30; July 5, 6(1963, 1967), 8(1966, 1967), 9, 11, 12(1965, 1968), 14, 15(1967, 1968), 17, 20; August 1.

*S. quadricustatella* (Chambers): June 11; July 1.

*S. tesquella* Clemens: May 20, 23, 25, 27, 29; June 1, 3–5, 12, 13, 17(1956, 1966, 1968), 18, 26; July 23, 31; August 5, 9, 11, 14, 16, 20, 23, 27. Reared: *Desmodium* sp.: issued May 31; June 2 (may overwinter as a pupa).

*S. venifica* (Hodges) (Figure 6.f): [May 30 (Hodges 1969)]; June 1–3, 7(1964, 1967), 8(1963, 1964), 11(1965, 1966), 15, 18, 22, 23(1957, 1966), 26[1957 (holotype, USNM; Hodges 1964)] (1964), 28, 30(1965, 1966); July 7, 8, 14, 17, 23, 25.

*S. victor* (Hodges): May 3, 14, 31; June 2, 4, 7(1964, 1966), 8, 10(1967, 1970), 11, 17, 19, 20.

#### **TANYGONA** Braun

*T. lignicolorella* Braun: June 26; July 2, 3, 6–8, 10–13, 15, 17(1959, 1965), 22, 23; August 17.

#### **TELADOMA** Busck

*T. helianthi* Busck: May 2, 14; June 4, 27, 28; July 10, 12(1962, 1965), 13, 16–18, 21, 23, 26, 27, 29(1967, 1969), 30, 31(1962, 1967, 1972); August 8, 12, 19, 23, 29.

*T. incana* Hodges (Figure 6.g): May 29; June 1, 17, 19, 20, 23, 29(1963, 1967), 30; July 1, 2, 6, 7, 10 (holotype, USNM; Hodges 1962b), 11, 14, 15(1964, 1966, 1967); August 3, 9.

#### **TRICLONELLA** Busck

*T. determinatella* (Zeller): May 26; June 2–4, 6, 7, 12, 13, 16, 18; July 21, 30; August 14, 15, 21, 30; September 6.

#### **WALSHIA** Clemens

*W. amorphella* Clemens: July 4. Reared: *Amorpha fruticosa* L. (larvae in twig and stem galls); issued June 1, 4–6, 10, 13, 15, 27; July 8, 12, 17.

*W. dispar* Hodges: July 7, 11, 13–16, 18, 27–30; August 10, 21.

*W. miscecolorella* (Chambers): May 31; June 2, 5, 17, 18, 21, 23, 30; July 6, 15, 21, 28, 30; August 3, 7, 12, 13, 17, 21, 26, 31; September 15, 18; October 17.

*W. particornella* (Busck): June 7, 12(1954, 1961); July 15, 28.

*W. similis* Hodges: June 5, 6; July 19; August 2, 3(1961, 1965), 6, 7, 14, 16, 23, 26, 27.

### 10. COSSIDAE

#### **PRIONOXYSTUS** Grote

*P. macmurtrei* (Guérin): May 13; June 1.

*P. robiniae* (Peck): July 10, 30.

### 11. ELACHISTIDAE

#### **COSMIOTES** Clemens

*C. illectella* Clemens: May 15; June 1, 4, 8(1944, 1963), 10, 11, 13, 16, 17, 24; July 12, 15, 18, 26, 29–31; August 15, 28–30; September 5, 7, 8, 10, 13(1956, 1967).

#### **ELACHISTA** Treitschke

*E. albicapitella* Engel: June 1(1965, 1971), 3, 6(1968, 1975), 8, 10, 11(1964, 1965), 14, 15(1964, 1971), 16(1939, 1962), 19, 29; July 23.

*E. madarella* (Clemens): June 12, 17, 19, 24, 26, 27, 30; July 9.

*E. purissima* Braun: May 20, 25, 28; June 5, 6(1968, 1975), 10, 11.

### 12. EPERMENIIDAE

#### **EPERMENIA** Hübner

*E. albapunctella* Busck: April 28.

*E. pimpinella* Murtfeldt: May 5, 6, 14, 17(1962, 1965), 21; June 3, 4, 9, 10, 15, 19; July 2, 11, 18, 28, 31; August 16, 28(1962, 1963).

#### **OCHROMOLOPIS** Hübner

*O. ramapoella* (Kearfott): May 10, 16. Reared: *Comandra umbellata* (L.) Nutt.; issued May 20–22, 25, 27, 28, 31; June 1.

### 13. ERIOCRANIIDAE

#### **DYSERIOCRANIA** Spuler

*D. auricyanea* (Walsingham): April 20, 22, 25(1962, 1966), 26, 28(1940, 1967), 29(1939, 1940, 1951), 30; May 2–5, 7, 20.

### 14. GELECHIIDAE

#### **AGNIPPE** Chambers

*A. bicolorella* Chambers: April 21; May 14, 17, 19, 25; June 9; July 3, 10, 13, 23, 24; 28, 29, 31; August 7.

#### **ANACAMPSIS** Curtis

*A. agrimoniella* (Clemens): June 10, 20, 26(1964, 1965); July 4, 7, 9, 11, 16; August 10, 19; September 6; October 3. Reared: *Agrimonia* sp. (agrimony); issued June 19, 24; August 30.

*A. conclusella* (Walker): June 7, 10, 21, 23, 24; July 1, 3, 7, 22(1936, 1965); August 6, 7, 10, 12, 14, 15, 19(1949, 1965), 21, 27; September 3.

*A. fragariella* Busck: June 15, 17, 21, 28; July 10; September 10, 14.

*A. fullonella* (Zeller): June 21, 25; July 23, 29; August 1, 7, 9, 15, 17, 19, 22, 27(1964, 1965); September 22.

*A. innocuella* (Zeller): June 10, 17, 20, 27; July 6, 11, 12, 17, 21, 26. Reared: *Populus tremuloides* Michx.; issued June 15(1955, 1956), 19(1955, 1956), 22, 25.

*A. levipedella* (Clemens): May 26; June 5; August 6, 7, 31; September 7(1946, 1963).



*A. lupinella* Busck: July 18. Reared: *Baptisia leucantha* T. & G.; issued June 25, 27, 28, 30; July 6.

*A. rhoifrutella* (Clemens): June 1, 6, 8, 13, 16, 17, 18(1954, 1975), 20, 24, 29; July 1, 12(1959–1961), 27. Reared: *Viburnum* sp.; issued June 7; July 14.

*A. tephriassella* (Chambers): July 26; August 7, 10, 26, 28; September 1, 8, 9.

*A. tristrigella* (Walsingham): June 22; July 7, 11, 12, 18; August 7, 11. Reared: *Corylus americana* Walt.; issued June 12, 23–25, 27, 28, 30; July 1, 2, 12, 16.

#### ANARSIA Zeller

*A. lineatella* Zeller: May 22, 28, 31; June 2, 4, 6, 7, 20; July 23, 30; August 10, 20.

#### ARISTOTELIA Hübner

*A. elegantella* (Chambers): April 21, 26.

*A. fungivorella* (Clemens): June 3, 13, 18, 19, 20(1967, 1968), 21, 25, 28(1961, 1965), 29, 30; July 3, 8(1964, 1966), 14, 25, 26; August 5, 6, 17, 21; September 3, 6, 18.

*A. pullusella* (Chambers): May 22, 27; June 7, 11; July 3, 14(1967, 1970), 15, 17, 20, 23, 24; August 2, 8, 10, 13, 17, 22, 27; September 3, 26.

*A. roseosuffusella* (Clemens): May 22, 26, 27; June 4, 6, 9, 10, 11(1964, 1965), 17, 21; July 9(1961, 1962), 12, 26; August 6, 9, 13, 17, 24; September 4, 9; October 11, 12, 17.

*A. rubidella* (Clemens): May 22, 25(1959, 1962), 27; June 1, 4, 6, 7, 10(1951, 1961), 16; July 2, 21–24, 28; August 10, 15, 17, 20.

*A. salicifungiella* (Clemens): April 20(1936, 1971), 22; June 20, 30; July 1, 23, 24, 26, 31; August 1, 4, 6, 7, 12, 13, 17, 19, 20, 23, 24; September 22(1959, 1968).

#### AROGALEA Walsingham

*A. cristifasciella* (Chambers): April 5, 16, 17, 21, 25–27, 30; May 1, 2(1968, 1969), 18, 28; June 1; July 7, 21, 26–29; August 14, 18. Reared: White oak [*Quercus alba* L.]; issued February [no date, forced indoors].

#### BATTARISTIS Meyrick

*B. concinuse* (Chambers): May 18, 25; June 4, 6, 8, 9; July 10, 18, 21; August 4, 6(1960, 1965), 18, 26, 29; September 9.

*B. taristis nigratomella* (Clemens): May 2, 14, 18, 23–25, 30; June 1(1946, 1961), 5, 7, 12(1942, 1954), 13, 15, 21, 23; July 22; August 6, 7, 10, 21; September 12.

#### BRYOTROPHA Heinemann

*B. branella* (Busck): June 24, 27, 29; July 7, 8(1948, 1956), 10, 11, 13, 16, 20, 21, 24.

*B. tahavusella* (Forbes): June 9; July 26; August 5, 6, 13, 17, 21.

#### CHIONODES Hübner

*C. bicostomaculella* (Chambers): May 20; June 1, 2, 7, 10, 11, 16(1951, 1967), 24, 27; July 2, 5, 9, 10, 11(1967, 1968, 1972), 14, 20(1965, 1972), 22–26, 30; August 6, 16, 20, 28. Reared: Oak [*Quercus* sp.]; issued August 24.

*C. continuella* (Zeller): June 18; July 13.

*C. discoocellella* (Chambers): May 26; June 4, 8, 9(1960, 1969, 1970), 17, 27, 30; July 10, 11, 26, 28; August 2(1966, 1971), 5(1969, 1973), 11, 25, 31; September 5, 9, 19, 22; October 11.

*C. fluvialella* (Busck): June 2, 4, 6, 7, 18, 24; July 2, 6, 9, 14, 15, 17, 18, 23; August 8, 13.

*C. fondella* (Busck): May 28–30; June 2, 3(1945, 1967), 12, 13, 15(1942, 1965), 17, 18, 20, 22(1963, 1968, 1976), 23(1946, 1966), 26, 30; July 1.

*C. formosella* (Murtfeldt): June 9, 28; July 1, 3, 7, 8, 10, 11(1963, 1968), 15, 16; August 7.

*C. fuscomaculella* (Chambers): June 20.

*C. hibiscella* (Busck): May 25, 28(1935, 1948, 1953), 30; July 21, 22; August 2, 5, 15, 20.

*C. mediofuscella* (Clemens): April 24, 25, 28; May 1, 2, 13, 24, 28; July 10, 22, 24, 26, 28; August 6, 10.

*C. negundella* (Heinrich): Reared: *Acer negundo* L.; issued July 1.

*C. obscurusella* (Chambers): June 23(1962, 1968), 29, 30; July 7, 8, 11, 12(1962, 1966), 13, 26, 29; August 6, 7, 13, 15, 21, 27; September 6, 8–10, 14, 19.

*C. pseudofondella* (Busck): June 6(1951, 1963), 9, 19, 20, 23–26, 27(1949, 1951), 28; July 1(1969, 1970), 2, 3, 7, 8, 10, 11, 21, 30.

*C. thoraceochrella* (Chambers): June 23, 26–28, 30; July 1, 2, 6, 7, 9(1949, 1974), 10(1966, 1976), 11–13, 15, 16, 18, 19, 21, 22(1961, 1967), 24–26, 28(1961, 1967), 31(1967, 1975); August 6, 9, 11, 13, 14(1965, 1967), 17, 20, 22, 23, 31; September 17, 20.

#### CHRYSOESTHIA Hübner

*C. drurella* (Fabricius): May 15, 22; June 19, 25; July 6, 29; August 16, 20–22, 29; September 2.

*C. lingulacella* (Clemens): June 3, 4, 6, 9, 12, 23, 27, 28; July 6, 7, 16, 19, 22, 24–28; August 8–10, 13, 18, 24, 31; September 2, 3.

#### COLEOTECHNITES Chambers

*C. apicitripunctella* (Clemens): May 30; June 10(1963, 1969), 18, 20(1968, 1971), 25; July 2(1975, 1976), 17.

*C. quercivorella* (Chambers): April 2(1963, 1968), 11, 12(1956, 1958), 13, 15, 16, 25, 26; May 6; June 16; July 2(1963, 1975), 3, 10, 12(1973, 1975), 22; August 23.

*C. thujaella* (Kearfott): May 24; August 10. Reared: Cedar [*Juniperus* sp.] apple galls [*Gymnosporangium* sp.] (borers) (overwintered in galls); issued (forced indoors) January 16, 17, 19–21, 24, 26(1962, 1963); February 2; March 13, 15, 30; April 7, 9, 13, 23, 28, 30; May 12.

**DELTOPHORA** Janse

*D. glandiferella* (Zeller): May 17, 19, 30; June 2, 9, 16, 17, 21, 23(1950, 1966), 25; July 6, 7, 10, 13; August 17, 21; September 10; October 20.

**DICHOMERIS** Hübner

*D. bilobella* (Zeller): July 4, 16.

*D. caia* Hodges (Figure 6.h): May 30; June 3, 7, 10, 12, 13, 15, 16, 19, 20, 28, 29; July 1, 2, 10; August 10(1949, 1966), 12, 14, 24, 27, 29; September 2, 4.

*D. citrifoliella* (Chambers): May 20, 25; June 2, 4; July 12, 17, 28; August 10, 12, 27.

*D. costarufuella* (Chambers): July 19, 21; August 6; September 8.

*D. homeris flavocostella* (Clemens): June 9, 12, 13, 15, 19(1955, 1967), 22–24, 26(1965, 1967), 27, 30(1957, 1966, 1968, 1970); July 2(1956, 1964), 4, 7, 14, 20.

*D. georgiella* (Walker): April 15, 16, 25; May 6, 7; June 17, 20, 22; July 1, 12; August 13, 28. Reared: Red oak [*Quercus rubra* L.]; issued June 16.

*D. glenni* Clarke (Figure 6.i): June 24, 27; [July, no specific date (Clarke 1947)]; August 1, 12(1961, 1963), 13, 15, 16, 19, 22, 25, 27(1961, 1974).

*D. homeris inserrata* (Walsingham): June 7, 13, 14, 17, 23; July 7. Reared: Goldenrod (*Solidago* sp.); issued June 7.

*D. juncidella* (Clemens): May 15, 16, 28; June 4, 6, 20(1939, 1968), 21, 28; July 6, 14, 17, 21(1941, 1965), 27; August 1–3, 5, 9, 10, 16–19, 21(1952, 1967), 22, 23, 30; September 6. Reared: Goldenrod [*Solidago* sp.] (leaf roller); issued June 6.

*D. ligulella* Hübner: April 27, 30; May 2, 20–22; June 25, 27, 29; July 1, 8, 12, 17, 22; August 14. Reared: *Corylus* sp.; issued June 5, 19. *Populus tremuloides* Michx.; issued July 1. Black oak [*Quercus velutina* Lam.] (borers in new shoots); issued June 20, 22. Oak [*Quercus* sp.]; issued June 30; July 1. Oak [*Quercus* sp.] apple gall; issued June 20. Goldenrod [*Solidago* sp.]; issued June 27.

*D. nonstrigella* (Chambers): May 30, 31; June 2–4, 5(1962, 1963), 6(1953, 1968), 8, 9, 10(1952, 1962, 1966), 12, 14, 15, 17, 22, 25; July 8. Reared: *Aster* sp.; issued June 4.

*D. ochripalpella* (Zeller): June 22(1962, 1964), 24, 26, 27(1950, 1964), 29; July 1, 2, 5, 7, 8, 12(1962, 1965), 13, 15, 18; August 2. Reared: *Aster* sp.; issued June 23. Goldenrod [*Solidago* sp.]; issued June 19.

*D. punctidiscella* (Clemens): May 29, 30(1938, 1963), 31; June 1, 2, 4(1944, 1954, 1967), 6, 9, 10, 13, 16(1947, 1948), 22.

*D. punctipennella* (Clemens): June 10, 11, 19, 23, 24, 26, 29(1955, 1973), 30(1948, 1968, 1970); July 8, 25; August 2, 18, 24; September 8, 10.

*D. serrativittella* (Zeller): May 25; June 25; July 29; August 28; September 1, 5(1945, 1948).

*D. setosella* (Clemens): May 6; June 25; July 7(1972, 1973), 14–16, 18, 20, 22, 26, 28; August 15, 24; September 6.

*D. ventrella* (Fitch): March 24; April 25; May 25, 30; June 17, 27(1962, 1970), 30(1964, 1970); July 1, 4, 6, 11, 12(1944, 1951), 13, 18(1948, 1965), 23; August 13. Reared: *Corylus* sp.; issued July 24. Walnut [*Juglans* sp.]; issued June 15, 20, 28; July 12.

*D. washingtoniella* (Busck): July 18; August 2(1939, 1962), 16. Reared: *Vernonia missurica* Raf. [labeled "*Vernonia illinoensis*"]; issued July 11.

**EVIPPE** Chambers

*E. leuconota* (Zeller): May 6, 16; June 6; August 6, 23.

*E. prunifoliella* Chambers: May 15, 29, 31; June 2(1963, 1964), 3, 4, 17, 20, 22, 24, 26, 28; July 17(1948, 1974), 26; August 3, 10, 26.

**EXOTELEIA** Wallengren

*E. pinifoliella* (Chambers): June 1, 4, 23; July 9.

**FASCISTA** Busck

*F. cercerisella* (Chambers): April 21, 28; May 3, 11, 13(1962, 1967), 15, 16, 21, 28, 31; June 10, 18; July 6; August 6, 8, 17, 26.

**FILATIMA** Busck

*F. pseudacaciella* (Chambers): May 6, 13, 25, 31; June 7; July 20, 27; August 1, 5, 9, 19, 24, 29; September 18. Reared: Black locust [*Robinia pseudo-acacia* L.]; issued May 15, 18.

*F. serotinella* (Busck): May 8, 14, 16, 17, 26; June 1, 2(1940, 1965); July 20, 22; August 3, 4, 11, 21. Reared: *Prunus serotina* Ehrh.; issued July 22, 23.

**FRUMENTA** Busck

*F. nundinella* (Zeller): July 1, 10, 15, 22; August 8, 10; September 12, 14, 15, 20, 22, 30; October 5, 11.

**GELECHIA** Hübner

*G. albisparsella* (Chambers): March 28; April 6; July 10, 11, 21, 23; August 18; September 13; October 27; December 8 (under bark), 19 (under bark).

*G. lynceella* Zeller: May 14, 26; June 2, 3, 5(1961, 1973), 6, 7, 9, 10, 12–15.

*G. versutella* Zeller: June 9, 15, 25, 27, 30; July 6(1966, 1967), 8, 10, 15, 20, 22, 25.

**GLAUCE** Chambers

*G. pectenalaella* Chambers: May 25, 30; June 2, 5, 6(1956, 1970), 11, 13, 14(1944, 1949), 15(1942, 1965), 17(1946, 1966), 26, 27.

**GNORIMOSCHEMA** Busck

*G. batanella* Busck: June 6, 7, 11, 12, 14, 15, 17–19, 22(1941, 1948), 23, 24(1964, 1973), 28, 30(1964, 1967); July 4, 5(1965, 1968), 12, 15, 22.



*G. gallaeasterella* (Kellicott): September 1, 10, 23, 25; October 3, 4. Reared: *Solidago flexicaulis* L. (labeled "*Solidago latifolia*") (stem galls); issued August 16, 20, 25(1940, 1948).

*G. gallaesolidaginis* (Riley): September 14, 28; October 3. Reared: *Solidago canadensis* L. (stem galls); issued September 9(1937, 1972). *Solidago altissima* L. (stem galls); issued September 6, 10. *Solidago gigantea* Ait. [labeled "*Solidago serotina* var. *gigantea*"] (stem gall); issued September 3. *Solidago* spp. (goldenrod) (stem galls); issued September 25, 30; October 3(1949, 1965), 5.

*G. gibsoniella* Busck: September 25. Reared: *Aster* spp. (stem galls); issued September 9, 12(1941, 1949), 14, 15(1940, 1956), 16, 17(1950, 1968), 22, 23(1959, 1969), 24.

*G. saphirinella* (Chambers): May 3–5; June 11, 22, 27; July 11, 12, 16(1949, 1970), 27, 31; August 6–8, 21; September 4, 6.

### **HELCASTOGRAMMA** Zeller

*H. chambersella* (Murtfeldt): May 19, 24, 25; July 4, 7, 23, 31; August 9, 15–17, 26(1970, 1971), 29; September 12.

*H. hystricella* (Braun): May 14, 25, 30(1961, 1977); June 11, 14, 23, 27; August 10–12, 20, 26, 29; September 5(1964, 1968), 8, 9, 12, 17, 25.

*H. melanocarpum* (Meyrick): August 6.

### **HOLOPHYSIS** Walsingham

*H. emblemella* (Clemens): June 18, 20, 21, 24, 29, 30; July 3, 8(1949, 1963), 10(1959, 1964, 1966), 11, 15, 16, 30; August 7.

### **ISOPHRICTIS** Meyrick

*I. anteliella* (Busck): July 25; August 27–30, 31(1946, 1962); September 2(1948, 1971), 3, 6–10, 30.

*I. similiella* (Chambers): June 13, 14(1967, 1968), 17, 18(1968, 1976), 21, 22, 25, 26, 28, 30; July 7, 13, 14; August 3, 6–8, 13, 14, 20; September 4, 14.

### **METZNERIA** Zeller

*M. lappella* (Linnaeus): June 14, 28, 30(1946, 1952, 1960); July 3(1935, 1936), 4, 9(1941, 1974), 18, 20, 21, 23, 30; August 13, 15. Reared: Burdock [*Arctium lappa* L.] (seed); issued (indoors) March 11, 15.

### **MONOCHROA** Heinemann

*M. absconditella* (Walker): May 26; June 6, 11, 14, 20, 23, 30; July 2, 21, 31; August 2, 5(1961, 1965), 15, 20; September 13. Reared: *Polygonum* sp., smartweed; issued June 14 (overwintered as a larva).

*M. angustipennella* (Clemens): June 30; July 7, 9, 14, 18, 20, 22, 25; August 5, 12.

*M. gilvolinella* (Clemens): July 4, 7, 9, 11, 14, 16; August 5(1947, 1965), 9, 13.

*M. quinquepunctella* (Busck): May 24, 25, 27, 30; June 9, 14(1949, 1951), 20, 30.

### **PHTHORIMAEA** Meyrick

*P. operculella* (Zeller): May 23; June 6; July 13, 29; August 21, 22, 24, 29; September 9.

### **PSEUDOCHELARIA** Dietz

*P. pennsylvanica* Dietz: May 26; June 13, 15–17, 23(1957, 1963), 25; July 15; August 6.

### **PSEUDOTELPHUSA** Janse

*P. basifasciella* (Zeller): July 28; August 17, 20.

*P. fuscopunctella* (Clemens): June 22.

*P. palliderosacella* (Chambers): April 20, 28; May 7, 10, 11, 13, 15, 17, 20, 22, 28; June 3, 5, 6; July 28; August 16, 22.

### **PTYCERATA** Ely

*P. busckella* Ely: June 11, 12, 17, 20, 28; July 17.

*P. petrella* (Busck): June 6, 7(1964, 1966), 8, 13, 14, 19, 30.

### **RECURVARIA** Haworth

*R. nanella* (Denis & Schiffermüller): June 16, 19, 26, 28; July 1, 14, 19.

### **SCROBIPALPA** Janse

*S. atriplicella* (F. v. Röslerstamm): April 28; May 4(1934, 1969), 11, 26; June 23, 28–30; July 6, 7, 9; August 2, 6(1964, 1968), 13(1949, 1952), 16, 20, 21, 23, 27, 31; September 5, 10.

### **SCROBIPALPULA** Povolný

*S. artemisiella* (Kearfott): April 16; May 22; June 8, 11, 17, 21, 25, 26; July 7, 26, 31; August 19.

### **SINOE** Chambers

*S. robiniella* (Fitch): May 17, 25, 27, 31; June 5, 7, 16, 18(1948, 1949, 1969), 23, 27, 28, 30; July 2, 5, 6; August 1, 4, 10, 24, 27; September 9. Reared: Black locust [*Robinia pseudo-acacia* L.]; issued May 17 (larva collected previous fall).

### **SITOTROGA** Heinemann

*S. cerealella* (Olivier): May 4; October 4.

### **SOPHRONIA** Hübner

*S. primella* Busck: May 3.

### **STEGASTA** Meyrick

*S. bosqueella* (Chambers): June 6, 9, 28; July 17, 22, 29; August 4, 8, 11–13, 23, 25, 28, 29, 30(1944, 1956); September 1, 2, 15, 18, 22; October 6, 14.

**STEREOMITA** Braun

*S. andropogonis* Braun: August 2, 3, 7–9, 10(1964, 1971), 12, 14, 17(1964, 1968), 21, 23, 24, 27(1964, 1967), 29; September 2, 3, 8.

**STROBISIA** Clemens

*S. iridipennella* Clemens: June 3, 11, 15, 18(1939, 1944), 25; July 6(1961, 1967), 7, 9, 10.

**SYMMETRISCHEMA** Povolný

*S. lavernella* (Chambers): March 12; May 24; June 2, 4, 9, 29; July 2, 8, 10, 16, 17, 28(1948, 1968, 1969), 30; August 8–10, 14, 17, 19–22; September 15. Reared: Sumac [*Rhus* sp.] (seed heads); issued June 4.

*S. pallidochrella* (Chambers): May 14, 20; June 1; July 25(1967, 1970), 26, 29, 31; August 3, 5, 7(1962, 1968, 1969), 8(1963, 1969), 12.

*S. striatella* (Murtfeldt): May 31; July 31; August 26, 29; September 1, 3, 4, 13, 17, 18, 25; October 27.

**SYNCOPACMA** Meyrick

*S. palpilineella* (Chambers): June 2, 4, 5, 9, 14, 16, 18, 19, 23, 25, 28; July 12, 28(1948, 1962, 1965), 30; September 7, 18. Reared: *Psoralea tenuiflora* Pursh; issued June 14, 18, 24.

**TAYGETE** Chambers

*T. attributella* (Walker): June 6–9, 10(1944, 1965), 11–13, 17–19, 22, 26, 27, 29; July 12, 17.

*T. sylvicolella* (Busck): March 24, 28(1943, 1968), 30(1953, 1963), 31; April 2(1939, 1956), 5(1956, 1969), 6, 9, 12, 14, 16(1967, 1971), 17, 20, 21, 23; July 13; October 11.

**TELPHUSA** Chambers

*T. latifasciella* (Chambers): April 26; May 20, 30(1962, 1963); June 3, 6, 9, 13(1938, 1963), 14, 15(1942, 1963, 1965, 1973), 17, 18, 21, 24, 27, 29; July 2(1966, 1970), 12, 18, 23; August 28. Reared: Oak [*Quercus* sp.]; issued June 13.

*T. longifasciella* (Clemens): April 12, 20, 25(1962, 1966), 26; May 2, 4, 6, 7, 9, 10, 13, 15, 17, 21, 25, 30.

**THEISOA** Chambers

*T. constrictella* (Zeller): May 20(1955, 1962), 21; June 8–10, 30; July 2, 10, 11, 16, 23, 24, 28; August 1, 4, 6, 7, 10, 12(1965, 1969), 14, 21, 26.

**TRYPANISMA** Clemens

*T. panisma prudens* Clemens: May 14–16, 20, 21, 25, 26(1967, 1969), 28(1948, 1969); June 1, 2(1966, 1967), 7, 9(1964, 1970), 11, 12, 14, 24; July 25, 26, 29; August 1, 5, 7, 14(1963, 1967), 29; September 6.

**UNTOMIA** Busck

*U. albistrigella* (Chambers): June 10, 16, 18, 22, 24, 27, 28; July 2(1963, 1964), 6(1963, 1967), 7, 15, 18, 20.

**XENOLECHIA** Meyrick

*X. ontariensis* Keifer: May 20, 24, 27(1963, 1970), 31; June 4, 6(1948, 1968), 7(1966, 1967, 1972), 8, 10, 11, 13, 14, 16, 18, 22, 24.

## 15. GLYPHIPTERIGIDAE

**ABRENTHIA** Busck

*A. cuprea* Busck: June 17, 18, 24; July 4.

**GLYPHIPTERIX** Hübner

*G. circumscriptella* Chambers: June 8, 10, 14, 15(1957, 1961, 1962, 1965), 16, 20, 21, 23(1962, 1966, 1968), 24, 26, 27, 28(1948, 1950), 30; July 1, 2, 7.

*G. impigritella* Clemens: May 3, 5, 18, 30; June 1, 3, 4, 10, 21, 23–25; July 13, 15, 17, 24, 29, 31; August 3, 6, 11, 27; October 3; November 2.

*C. quadragintapunctata* Dyar: June 5, 14–17, 21, 23, 24, 29.

## 16. GRACILLARIIDAE

**CALOPTILIA** Hübner

*C. belfrageella* (Chambers): May 2, 7, 14, 17, 18, 23, 24, 30; June 28; July 8, 27; August 11, 14. Reared: *Cornus drummondii* Meyer. [labeled "*Cornus asperifolia*"] (leaf roller); issued August 13, 18, 29–31.

*C. minimella* (Ely): April 26; June 10, 12, 19, 26(1967, 1972); July 11, 22, 23, 26, 27, 30; August 6–8, 12(1969, 1970), 14, 26(1970, 1974), 30; September 16; October 1.

*C. packardella* (Chambers): April 24, 26(1956, 1963), 29; May 3, 7, 10, 11, 21, 30; June 1, 3, 9, 18, 22. Reared: Hard maple [*Acer saccharum* Marsh.]; issued May 13, 19, 22 (overwintered as pupae).

*C. quercinigrella* (Ely): April 25(1963, 1969), 29; May 2(1968, 1969), 4.

*C. rhoifoliella* (Chambers): May 17; June 5, 15, 19, 23, 27, 30; July 4, 6, 10, 16, 17, 27, 31; August 3, 21(1965, 1976); September 5, 12. Reared: *Rhus radicans* L. [labeled "*Rhus toxicodendron*"]; issued August 9, 16.

*C. stigmatella* (Fabricius): April 15; July 7; August 10; October 20. Reared: Willow [*Salix* sp.] (from pupa in folded tip of leaf); issued October 4.

*C. violacella* (Clemens): May 25; June 9, 17; August 3, 8, 9, 13, 16. Reared: *Desmodium* sp.; issued June 27; July 1, 22, 26.



**CAMERARIA** Chapman

*C. aceriella* (Clemens): May 31; June 7, 20, 30; July 3, 11, 12, 20(1963, 1964), 22; August 1, 13. Reared: Soft maple [*Acer saccharinum* L.]; issued August 14.

*C. australisella* (Chambers): June 14, 22, 26, 30; July 7; August 1. Reared: *Quercus alba* L. (larva overwintered in blotch mine on upperside of leaf); issued March 12, 15; April 5, 8, 15, 21; May 21 (all forced indoors). *Quercus imbricaria* Michx. (blotch mine); issued April 14 (reared indoors).

*C. bethunella* (Chambers): June 9, 19, 30; July 25; August 5, 7(1963, 1970), 15, 29. Reared: *Quercus imbricaria* Michx. (larva overwintered in blotch mine on upperside of leaf); issued March 1; April 6, 14, 21, 28, 30 (all forced indoors); August 14. *Quercus macrocarpa* Michx.; issued August 14.

*C. caryaefoliella* (Clemens): Reared: *Carya ovata* (Mill.) K. Koch; issued June 24. *Carya* sp.; issued July 15; August 3, 21.

*C. chambersella* (Walsingham): June 1, 2, 5, 10, 17, 20, 21, 29; July 25; August 15, 18, 22. Reared: *Quercus* sp. (larva in blotch mine on upperside of leaf); issued March 27 (forced indoors).

*C. cinninatiella* (Chambers): May 6, 24, 31; June 2, 6, 11, 12, 23, 30; July 16, 24; August 6. Reared: *Quercus alba* L. (larva in blotch mine on upperside of leaf); issued March 12, 28, 31 (all forced indoors); April 10; August 2, 6, 15.

*C. conglomeratella* (Zeller): May 4, 13–15; June 9.

*C. corylisella* (Chambers): May 9(1962, 1963), 10, 19; June 7, 11; July 10, 15(1964, 1966), 17. Reared: *Corylus americana* Walt. (larva in blotch leaf mine); issued July 8, 27; August 2, 10.

*C. fletcherella* (Braun): August 9, 20, 24.

*C. guttifinitella* (Clemens): June 2, 28; July 5, 24; August 15, 23, 25. Reared: *Rhus radicans* L. [labeled "*Rhus toxicodendron*"] (leaf miner); issued February 22 (indoors); July 29; August 1, 2.

*C. hamadryadella* (Clemens): May 3, 4, 6, 16, 20, 25; June 2, 3, 5; July 17, 22–24; September 26. Reared: *Quercus alba* L. (leaf miner); issued March 15 (indoors); June 24; July 27. *Quercus macrocarpa* Michx.; issued July 21, 26.

*C. lentella* (Braun): April 26; May 15, 26; July 29; August 3.

*C. macrocarpella* (Frey & Boll): April 26; May 6, 7, 13, 20; June 4, 5.

*C. ostryarella* (Chambers): May 15; June 10. Reared: *Ostrya virginiana* (Mill.) K. Koch (larva in blotch mine on upperside of leaf); issued Feb. 20, 22; March 24; April 3, 9, 10, 14(1940, 1965) (all forced indoors); May 15; June 10; July 22, 26.

*C. quercivorella* (Chambers): April 28; June 1, 17, 21, 23; July 22, August 6, 21.

*C. saccharella* (Braun): May 24; June 1, 8, 9, 15, 18.

*C. ulmella* (Chambers): May 2; June 1; July 11; August 9, 17, 20. Reared: *Quercus alba* L. (leaf miner); issued August 8. *Ulmus* sp.; issued July 15; September 10.

**CHRYASTER** Kumata

*C. ostensackenella* (Fitch): May 14, 20, 26(1966, 1967), 30; June 18; July 23, 26, 27, 31; August 21, 24, 27, 30; September 5, 6, 12. Reared: *Robinia* sp. (leaf mine); issued May 10 (indoors).

**CREMASTOBOMBYCIA** Braun

*C. ambrosiella* (Chambers): August 17, 20. Reared: *Ambrosia trifida* L.; issued July 3.

*C. ignota* (Frey & Boll): Reared: *Verbesina alternifolia* (L.) Britt. [labeled "*Actinomeris alternifolia*"] (tentiform mine on underside of leaf); issued April 21 (forced) (overwintered as a pupa); May 22; July 16; August 9, 16.

**LEUCANTHIZA** Clemens

*L. amphicarpeaefoliella* Clemens: July 24. Reared: *Amphicarpa bracteata* (L.) Fern. [labeled "*Amphicarpa monoica*"]; issued September 21.

**MICRURAPTERYX** Spuler

*M. salicifoliella* (Chambers): July 23, 30. Reared: *Salix* sp. (blotch or tentiform leaf miner on underside of leaf); issued October 4, 5, 9.

**PARECTOPA** Clemens

*P. occulta* Braun: June 4, 7; July 4, 9, 20, 24, 28, 30; August 5, 6, 12, 14(1942, 1966, 1967, 1972). Reared: Sweet clover [*Melilotus* sp.] (leaf miner); issued October 5, 25.

**PARORNIX** Spuler

*P. crataegifoliella* (Clemens): June 16(1956, 1962); July 7, 10, 12; August 1, 9, 26, 27, 31; September 9. Reared: *Crataegus* sp.; issued June 8. *Prunus serotina* Ehrh.; issued September 10.

**PHYLLOCNISTIS** Zeller

*P. insignis* Frey & Boll: July 2; August 15, 18. Reared: *Prenanthes alba* L. (serpentine leaf miner); issued August 11. *Prenanthes* sp.; issued June 14; August 12, 14, 15; October 1; November 3.

*P. populiella* Chambers: April 13; June 5, 7, 15; July 27; August 5.

*P. vitifoliella* Chambers: March 29; April 13, 15, 16, 22, 23, 27; May 14, 22(1934, 1966); June 4, 8, 19, 23; August 6, 27, 31; September 12, 19, 20.

**PHYLLONORYCTER** Hübner

*P. aeriferella* (Clemens): May 2, 14, 17, 22, 27; July 12, 16; August 11, 24; September 17. Reared: *Quercus imbricaria* Michx. (tentiform mine on underside of leaf); issued March 12, 30 (indoors). *Quercus muehlenbergii* Engelm.; issued March 22 (forced indoors). *Quercus velutina* Lam.; issued March 17 (forced indoors).

*P. albanotella* (Chambers): May 20, 23; June 2.

*P. argentifimbriella* (Clemens): March 29; April 16; May 3, 4, 14; June 4; August 30. Reared: *Quercus alba* L. (tentiform mine on underside of leaf); issued January 25, 31; February 14, 15, 17; March 1, 16, 19, 24 (all forced indoors).

*P. argentinotella* (Clemens): May 23–25; August 5. Reared: *Ulmus* sp. (miner on underside of leaf); issued May 23 (overwintered as a pupa); August 25.

*P. basistrigella* (Clemens): March 31; June 1, 10, 14; August 7, 14, 29. Reared: *Quercus alba* L. (tent mine on underside of leaf); issued January 10 [indoors?]; June 2; July 26.

*P. bataviella* (Braun): April 24, 29, 30; May 2, 6(1966, 1969), 30; June 3, 5, 22; July 21, 26, 28, 30; August 17, 23, 26; September 17.

*P. celtifoliella* (Chambers): May 5; June 22; September 5, 13, 15(1956, 1962), 30; October 5. Reared: *Celtis occidentalis* L. (tent mine on underside of leaf); issued September 12, 16, 22, 24, 25.

*P. celtisella* (Chambers): April 30; May 1, 4; June 24; July 8, 17, 28(1956, 1964); August 6, 8, 10, 11, 13(1965, 1966), 28.

*P. clemensella* (Chambers): March 16; April 16, 20, 25(1960, 1969); May 9; July 10; August 25; September 30. Reared: *Acer saccharum* Marsh. (blotch mine on leaf); issued May 3, 18 (all reared indoors) (overwintered as pupae).

*P. crataegella* (Clemens): April 18, 25; May 9(1953, 1958), 10; June 30; August 19; September 12. Reared: Apple [*Malus* sp.] (mine); issued April 27 (indoors).

*P. fitchella* (Clemens): May 3; June 20; August 29. Reared: *Quercus alba* L. (tent mine on underside of leaf); issued February [no date given]; March 12, 16, 20, 21, 31; April 2, 3, 13; May 15 (all reared indoors); August 16.

*P. fragilella* (Frey & Boll): Reared: *Lonicera* sp. (tentiform mine on underside of leaf); issued February 16 (forced indoors).

*P. hagenii* (Frey & Boll): April 12; May 4; June 24, 30; July 6; August 1, 9, 10, 14(1966, 1967, 1972), 21, 23, 24; September 2.

*P. lucetiella* (Clemens): May 6, 26; June 7, 10; July 16; August 25. Reared: *Tilia americana* L. (blotch mine); issued July 15; August 1.

*P. lucidicostella* (Clemens): April 12, 16, 25–27, 29; May 2, 7; July 7. Reared: *Acer saccharinum* L. (blotch leaf miner); issued March 16 (indoors). Hard maple [*Acer saccharum* Marsh.]; issued February [no date given] (indoors); May 12, 13. *Quercus alba* L.; issued March 15, 24 (indoors). *Quercus* sp. (collected as a pupa December 15); issued February 4 [indoors?].

*P. malimalifoliella* (Braun): Reared: *Malus pumila* Mill. [labeled “*Malus malus*”] (leaf miner on underside of leaf); issued March 15 (indoors).

*P. morrisella* (Fitch): January 15 (hibernating under bark); May 18. Reared: *Amphicarpa bracteata* (L.) Fern. [labeled “*Amphicarpa monoica*”] (tentiform leaf mine on underside of leaf); issued September 13, 21–23, 25, 28, 30(1961, 1967); October 2–4, 6, 8(1964, 1968).

*P. obscuricostella* (Clemens): April 16, 17, 24, 25, 30; May 4; June 3. Reared: *Ostrya virginiana* (Mill.) K. Koch (tentiform leaf miner); issued March 18 (forced indoors).

*P. ostryaefoliella* (Clemens): April 16, 20, 25, 26; May 4, 7; June 23. Reared: *Ostrya virginiana* (Mill.) K. Koch (tentiform mine on underside of leaf); issued March 2 (indoors), 15 (indoors); May 8, 12, 15.

*P. propinquella* (Braun): April 17, 22, 23, 25(1949, 1962, 1964, 1966); May 10. Reared: *Prunus serotina* Ehrh. (tentiform mine on underside of leaf); issued February 4 (indoors); August 28, 31.

*P. quercialbella* (Fitch): April 16, 20; May 12, 20; June 4, 18, 29. Reared: *Quercus alba* L. (tentiform mine on underside of leaf); issued February 17 (indoors). *Quercus* sp.; issued March 5.

*P. rileyella* (Chambers): June 4; July 21, 28. Reared: *Quercus imbricaria* Michx.; issued April 15.

*P. robiniella* (Clemens): April 15, 24, 29; May 3, 10; June 2; July 11, 25; August 11, 25. Reared: *Robinia pseudo-acacia* L. (miner on underside of leaf); issued September 3, 12; October 10.

*P. salicifoliella* (Chambers): March 22, 29; May 1, 8, 14; July 30. Reared: *Salix* sp. (tent mine); issued October 15.

*P. scudderella* (Frey & Boll): July 17. Reared: *Salix* sp. (tentiform mine on underside of leaf); issued March 3, 5, 13, 16, 18, 19 (all forced indoors); April 8, 20, 21.

*P. tiliacella* (Chambers): May 6, 10, 26; June 16; July 1.

*P. tritaenianella* (Chambers): April 23, 25, 27; May 3, 4, 10; June 3; July 23; August 4.

*P. uhlerella* (Fitch): Reared: *Amorpha fruticosa* L. (mine on underside of leaf); issued March 29; May 13; August 11, 18; September 8, 20, 25.

## 17. HELIODINIDAE

### *HELIODINES* Stainton

*H. nyctaginella* Gibson: May 7; June 1; July 10. Reared: Four o'clock [*Mirabilis jalapa* L.]; issued August 1, 5, 7, 9. *Mirabilis* sp. [labeled “*Oxybaphus*”]; issued May 7; June 1; July 10, 28; August 3, 9.

### *SCHRECKENSTEINIA* Hübner

*S. erythriella* (Clemens): May 14, 17, 19, 20; June 1, 2, 4, 6, 7(1941, 1959), 10(1961, 1962), 20; July 17, 19, 26, 28; August 7, 15.

*S. festaliella* (Hübner): June 1, 3, 6, 8, 12, 23, 27; July 10, 15; August 11, 15; October 5.

## 18. HELIOZELIDAE

### *ANTISPILA* Hübner

*A. isabella* Clemens: May 26 [no date given]; June 12, 16, 23, 24(1966, 1971), 25, 26, 30(1962, 1969); July 7, 23, 31; August 6, 10(1965, 1970, 1973), 26; September 2.



**HELIOZELA** Herrich-Schäffer

*H. aesella* Chambers: April 25(1938, 1960), 28(1938, 1962), 29; May 4, 10(1953, 1956), 12, 13.

## 19. INCURVARIIDAE

**TEGETICULA** Zeller

*T. yuccasella* (Riley): June 20, 23(1946, 1966); July 6(1959, 1961).

## 20. LIMACODIDAE

**ADONETA** Clemens

*A. spinuloides* (Herrich-Schäffer): June 17; July 1–3, 6, 7, 12, 14, 23.

**APODA** Haworth

*A. biguttata* (Packard): June 14, 15, 19, 20, 25, 26; July 7, 16.

*A. y-inversum* (Packard): June 2, 4–6, 8, 26, 28; July 2(1934, 1966), 8, 12; August 7.

**EUCLEA** Hübner

*E. delphinii* (Boisduval): June 5, 13, 20, 25; July 2, 6, 10(1937, 1951), 26.

**ISA** Packard

*I. textula* (Herrich-Schäffer): June 20, 21, 28, 30; July 1, 2(1956, 1970), 3, 6, 7, 9, 10; August 16.

**LITHACODES** Packard

*L. fasciola* (Herrich-Schäffer): June 9(1934, 1972), 11, 21(1921, 1935), 24; July 2, 4, 9, 23.

**PACKARDIA** Grote & Robinson

*P. elegans* (Packard): June 19, 23.

*P. geminata* (Packard): May 20, 29, 31; June 2–4, 9, 10, 16, 18.

**PARASA** Moore

*P. chloris* (Herrich-Schäffer): June 25; July 8–10, 12, 25.

*P. indetermina* (Boisduval): July 10. Reared: *Asimina triloba* (L.) Dunal; issued June 3, 10, 21, 24.

**PHOBETRON** Hübner

*P. pitheciium* (J.E. Smith): June 10, 24, 25; July 18; August 1.

**PROLIMACODES** Schaus

*P. badia* (Hübner): July 2, 12, 18.

**SIBINE** Herrich-Schäffer

*S. stimulea* (Clemens): June 16, 28–30; July 1, 2, 10(1964, 1969), 11, 22.

**TORTRICIDIA** Packard

*T. flexuosa* (Grote): July 2, 7, 15, 16(1963, 1967), 18–20, 23(1955, 1963), 25, 28, 30.

*T. testacea* Packard: May 16, 17, 20, 21, 25; June 2, 5, 17, 30.

## 21. LYONETIIDAE

**BEDELLIA** Stainton

*B. somnulentella* (Zeller): April 29; June 27, 28; July 11, 30; August 8, 21, 22, 30; September 2, 4(1942, 1963), 30(1941, 1968); October 14, 20; November 2. Reared: *Ipomoea purpurea* (L.) Roth; issued August 25; September 3, 4, 9; October 3.

**BUCCULATRIX** Zeller

*B. angustata* Frey & Boll: April 16, 21, 25, 28, 30(1957, 1968); May 1–3, 6, 10, 13, 14, 16, 26; June 4, 10, 17, 22; August 4, 10, 19.

**PROLEUCOPTERA** Busck

*P. smilaciella* (Busck): May 24; June 27; July 12(1963, 1965), 13, 15(1964, 1968), 30; August 9, 21. Reared: *Smilax* sp. (blotch [leaf] miner); issued August 22.

## 22. MOMPHIDAE

**MOMPHA** Hübner

*M. argentimaculella* (Murtfeldt): June 1, 10.

*M. brevivittella* (Clemens): July 19, 21, 30. Reared: *Oenothera biennis* L. (seed pod); issued October 8. *Oenothera* sp. (seed capsule); issued October 2–6, 8.

*M. cephalonhiella* (Chambers): April 29; June 10, 13, 18–20, 24(1954, 1961), 25, 26(1964, 1967), 30; July 9, 31; August 14, 15, 20, 21; September 2, 17. Reared: *Cephalanthus occidentalis* L. (partial leaf miner); issued November 29, 30 (indoors).

*M. circumscriptella* (Zeller): April 13, 15, 30; May 25; June 18; July 8, 14, 19, 24, 25, 28; August 2, 7, 11, 13; September 18; October 25, 28. Reared: *Oenothera biennis* L. (seed capsule); issued October 4, 6. *Oenothera* sp. (seed capsule); issued October 2, 5, 11.

*M. eloisella* (Clemens): May 25; June 2, 7, 9, 10, 17, 20, 30; July 3, 8, 9, 23, 28; August 10.

*M. luciferella* (Clemens): June 15(1964, 1967), 19, 24, 30(1946, 1948); July 2, 5, 6, 8, 10, 12.

*M. murtfeldtella* (Chambers): May 29, 31; June 2, 6, 16, 19, 22, 23; July 9, 15, 18, 25, 28; August 1, 8, 13, 21, 23.

*M. passerella* (Busck): May 17; June 5; August 2; September 5.

*M. stellella* Busck: March 26; June 11, 13, 14, 19–21, 27, 28, 30; July 12, 24; August 10, 14, 22.

*M. terminella* (Westwood): June 4, 10, 15, 16, 24; July 6, 7, 9, 10, 13; August 1, 2, 4.

## 23. NEPTICULIDAE

### *ECTOEDEmia* Busck

*E. obrutella* (Zeller): May 15, 16, 20, 24, 25(1962, 1967), 26(1963, 1967); June 1(1961, 1973), 2, 3, 4(1964, 1966, 1974), 5, 7, 10–12, 18; July 3, 25.

### *OBRUSSA* Braun

*O. ochrefasciella* (Chambers): June 3, 4, 7, 8, 11(1964, 1965), 14, 30; July 7, 12, 14, 17, 25; August 1.

## 24. OECOPHORIDAE

### *AGONOPTERIX* Hübner

*A. argillacea* (Walsingham): March 19, 24, 27; April 12(1936, 1950, 1960), 23; June 9, 22, 25, 26, 28–30; July 1, 2, 5, 10(1932, 1961), 17, 25–27; August 3(1966, 1967, 1973), 5, 14, 17; October 25. Reared: *Amorpha fruticosa* L.; issued August 18. Willow [*Salix* sp.]; issued April 25; June 23.

*A. atrodorsella* (Clemens): Reared: *Eupatorium purpureum* L. (?); issued July 30.

*A. clemensella* (Chambers): April 14, 15; July 1, 3, 7(1967, 1970), 11(1968, 1972), 12, 13, 20, 23.

*A. curvilineella* (Beutenmüller): April 9; June 23, 25, 29, 30; July 1, 5–8, 11, 14, 15, 17, 20, 22; August 11, 28; December 19 (under bark).

*A. dimorphella* Clarke (Figure 6.j): June 13, 16, 20, 29. Reared: *Amorpha fruticosa* L. (false indigo); issued June 4–6, 8–14, 16, 20; July 6. Notes. According to Clarke (1941), Glenn wrote in a letter: "The first emergence was June 4(1938), and the heaviest from June 10–13. Pupation in the field occurs immediately (after the larva matures) at the base of the [host] plant. In many instances this is the only place available as the shrub is often completely surrounded by water, except for a small hummock, about a foot in diameter, formed by the plant roots."

*A. eupatoriella* (Chambers): January 15 (under bark); April 14; June 9(1956, 1961); September 23; October 28. Reared: *Verbesina alternifolia* (L.) DC. [labeled "*Actinomeris alternifolia*"]; issued August 8–10, 16–18, 20, 22.

*A. flavicomella* (Engel): June 9, 10(1962, 1975), 17–19, 21, 22, 28; July 14. Reared: *Taenidia integerrima* (L.) Drude (leaf roller); issued June 25, 28, 29; July 2, 3.

*A. lythrella* (Walsingham): July 9, 10, 19; August 1, 5, 14–18, 29. Reared: *Hypericum punctatum* Lam. var. *pseudomaculatum* (Bush) Fern. [labeled "*Hypericum pseudomaculatum*"]; issued July 2, 24; August 11, 28.

*A. nebulosa* (Zeller): June 21, 23(1951, 1955), 24, 27(1951, 1955); July 19, 27. Reared: *Antennaria plantaginifolia* (L.) Hook.; issued June 17, 19. *Antennaria* sp. (leaves); issued June 21–24, 27.

*A. nigrinotella* (Busck): April 30; May 9(1952, 1961, 1967), 12; June 9; July 17, 24; October 4, 11. Reared: Maple [*Acer* sp.]; issued August 14. *Ceanothus americanus* L.; issued July 15. *Ptelea trifoliata* L.; issued June 29; July 2, 3, 5, 7, 13, 20, 28. *Xanthoxylum americanum* Mill. [labeled "*Zanthoxylum americanum*"]; issued June 17; July 1, 2, 5, 31; August 18.

*A. pteleae* Barnes & Busck: March 28(1963, 1968), 30; April 20, 22; May 3, 6, 8, 17; June 17, 20, 26, 28; July 2, 9, 11, 30; August 3. Reared: *Ptelea trifoliata* L.; issued May 30.

*A. pulvipennella* (Clemens): January 15 (under bark); March 30; April 16, 29; May 25; June 29; July 12, 13. Reared: *Boltonia asteroides* (L.) L'Hér.; issued July 26. *Solidago gigantea* Ait. [labeled "*Solidago serotina*"]; issued July 3–4, 8.

*A. robiniella* (Packard): June 26; July 9, 10, 15.

*A. thelmae* Clarke: July 3; August 5, 7, 8, 16, 18, 21, 26.

### *ANTAEOTRICA* Zeller

*A. humilis* (Zeller): May 21, 26, 31; June 6, 7, 12; July 17, 23; August 12. Reared: Oak [*Quercus* sp.]; issued June 9 (wintered as a larva); August 9.

*A. leucillana* (Zeller): May 3, 9, 15, 16, 21–23, 26, 28, 30; June 2; July 23, 24, 30; August 1, 5, 11, 18, 20.

*A. osseella* (Walsingham): July 4, 10, 23, 25, 27, 29; August 6, 9, 13. Reared: Oak [*Quercus* sp.]; issued June 26; July 10, 17.

*A. schlaegeri* (Zeller): May 20, 21, 23, 26–30; June 2.

### *CALLIMA* Clemens

*C. argenticinctella* Clemens: June 15, 19, 22, 24, 26(1936, 1974), 28; July 7(1940, 1966), 10, 12(1960, 1962), 28, 29; August 1, 2, 7(1948, 1970), 10–12, 14.

### *DECANTHA* Busck

*D. boreasella* (Chambers): June 11(1964, 1965), 18, 23, 26, 27(1961, 1964), 28, 30; July 6, 8, 9, 12, 16, 29; August 2.

### *DEPRESSARIA* Haworth

*D. cinereocostella* Clemens: September 5. Reared: *Cicuta maculata* L. (flowers); issued July 23, 28, 30; August 2–4. *Sium suave* Walt. [labeled "*Sium cicutaefolium*"]; issued August 22, 23, 26, 30, 31; September 2, 5, 17.

*D. pastinacella* (Duponchel): July 9(1974, 1975), 13, 15; August 12, 13; September 1, 4, 18, 23.

### *EIDO* Chambers

*E. trimaculella* (Fitch): June 4, 9, 10, 12–14, 19, 30(1946, 1967); July 5, 7.



**ETHMIA** Hübner

*E. longimaculella* (Chambers): May 25; June 2, 5, 7, 8, 12, 16, 19, 23.

*E. zelleriella* (Chambers): May 13, 20.

**GONIOTERMA** Walsingham

*G. mistrella* (Busck): June 25(1959, 1965); July 3, 4, 6, 8, 10–12, 20; August 21, 24(1962, 1964), 27; September 1, 6, 8, 22.

**MACHIMIA** Clemens

*M. tentoriferella* Clemens: September 5(1943, 1965), 10, 13, 15, 17–19, 21, 22, 24, 29. Reared: Willow [*Salix* sp.] (larva green, in tube of folded-over leaf); issued September 3.

**MARTYRINGA** Busck

*M. latipennis* (Walsingham): July 1, 7, 10, 14–16, 25, 30; August 1, 8, 12, 14, 15(1962, 1965), 18.

**MATHILDANA** Clarke

*M. newmanella* (Clemens): May 22, 26, 29(1954, 1960), 31; June 2, 3, 7, 21.

**MENESTA** Clemens

*M. tortriciformella* Clemens: May 30; June 5, 7, 8, 30.

**NITES** Hodges

*N. grotella* (Robinson): Reared: *Corylus americana* Walt.; issued June 25; July 10.

*N. ostryella* (McDunnough): June 15, 26, 28–30(1964, 1968); July 1, 5, 7, 8, 10, 12, 14, 15, 18, 23; August 15. Reared: *Corylus americana* Walt.; issued June 29. *Ostrya virginiana* (Mill.) K. Koch; issued June 21.

**PSILOCORSIS** Clemens

*P. cryptolechiella* (Chambers): May 15(1958, 1962), 17, 18, 25, 26, 30; June 4, 5(1938, 1949), 7–13(1943, 1950), 14, 16, 17, 30; July 4, 11, 26, 30; August 7, 12. Reared: *Corylus americana* Walt.; issued June 7.

*P. quercicella* Clemens: May 13, 24, 26, 29; June 1, 9(1960, 1963), 11, 15, 16, 21; July 26; August 6, 10, 20. Reared: Oak [*Quercus* sp.]; issued June 2; July 31.

*P. reflexella* Clemens: May 8, 9, 23(1964, 1974), 25, 29(1954, 1975); June 2, 3(1962, 1975), 4, 6, 9(1970, 1975), 10(1951, 1966), 11, 14, 18, 24, 28, 30(1956, 1963); July 8, 12, 31; August 7, 18, 25; September 8.

**SEMIOSCOPIIS** Hübner

*S. inornata* Walsingham: April 10, 17, 20, 23, 25(1937, 1941), 28, 29; May 1, 4, 6.

*S. megamicrella* Dyar: March 22, 23, 26, 28(1943, 1954, 1968), 29–31; April 4, 9, 18, 23, 24.

*S. merricella* Dyar: April 20, 26; May 2, 3, 6, 7, 10(1947, 1975).

*S. packardella* (Clemens): May 12.

## 25. OPOSTEGIDAE

**OPOSTEGA** Zeller

*O. albogaleriella* Clemens: June 2, 6(1942, 1964), 7, 10, 17(1961, 1968), 18, 20, 30; July 6, 29; August 17.

*O. cretea* Meyrick: June 26, 28–30; July 23.

*O. quadristrigella* Chambers: June 4, 6, 7; July 2, 6, 15, 17, 20, 23; August 3.

*O. scioterma* Meyrick: June 4, 17, 23, 28; July 12, 23; August 5, 8, 29.

## 26. PLUTELLIDAE

**HOMADAULA** Lower

*H. anisocentra* Meyrick: June 26; July 24, 26, 29, 31; August 16, 18, 20, 24(1962, 1964), 26; September 3, 12.

**PLUTELLA** Schranck

*P. xylostella* (Linnaeus): January 19 ("flying [in] house"); April 10, 25, 30(1933, 1936); May 16, 22; June 2, 6, 16, 24, 25; July 5, 18, 21, 27; August 16; September 9.

**YPSOLOPHA** Latreille

*Y. dorsimaculella* (Kearfott): August 7; October 10.

## 27. PSYCHIDAE

**ASTALA** Davis

*A. confederata* (Grote & Robinson): June 14, 20; July 12.

**SOLENOBIA** Duponchel

*S. walshella* Clemens: April 12, 22(1966, 1968), 23, 25(1934, 1936, 1962, 1964, 1965), 26, 28, 30(1937, 1965); May 1, 2, 4.

**THYRIDOPTERYX** Stephens

*T. ephemeraeformis* (Haworth): July 23, 26; September 15, 18, 20.

## 28. PTEROPHORIDAE

**CAPPERIA** Tutt

*C. evansi* (McDunnough): August 31; September 8.

**CNAEMIDOPHORUS** Wallengren

*C. rhododactylus* (Denis & Schiffermüller): June 9, 11, 12, 15, 17, 19–22, 26, 28; July 5. Reared: Rose [*Rosa* sp.] (leaves); issued June 3, 5.

**EMMELINA** Tutt

*E. monodactyla* (Linnaeus): March 24; April 20, 23; May 29; June 6, 14, 16, 20, 23; July 1, 3, 8, 9, 11, 19, 23, 25, 26, 30; August 7, 10, 13, 23; September 12, 15, 19, 20, 25; October 5, 25, 31. Reared: *Ipomoea purpurea* (L.) Roth; issued September 6, 13.

**GEINA** Tutt

*G. periscelidactyla* (Fitch): June 5, 6, 11–14, 16, 17, 19, 21(1951, 1975); July 2. Reared: Wild grape [*Vitis* sp.]; issued June 11.

*G. tenuidactyla* (Fitch): June 3, 8, 9, 11, 15, 16(1941, 1951), 17, 18(1951, 1975), 19, 20, 22(1941, 1951), 24. Reared: *Geum canadense* Jacq.; issued June 9, 13, 14, 16. Blackberry [*Rubus* sp.]; issued June 21.

**OIDAEMATOPHORUS** Wallengren

*O. cretidactylus* (Fitch): June 15, 19, 21(1951, 1971), 23–25, 27, 29; July 7, 17. Reared: *Solidago* sp.; issued June 18, 19, 21, 22, 25.

*O. elliotti* (Fernald): June 18. Reared: *Eupatorium perfoliatum* L.; issued June 15, 24, 26–28.

*O. eupatorii* (Fernald): June 22, 23, 27, 29, 30; July 7(1972, 1976), 8. Reared: *Eupatorium purpureum* L.; issued June 27. *Eupatorium* sp.; issued June 14, 25, 27, 30.

*O. glenni* Cashatt (Figure 6.k): May 18, 25, 31; June 9(1960, 1963), 12 (holotype), 14. Reared: *Solidago canadensis* L. (in roots); issued June 5, 7, 9(1956), 14, 16. Goldenrod [*Solidago* sp.] (boring in roots); issued June 9(1955), 19. Notes. Glenn's rearing records show that this species is a root borer in *Solidago*, but it also has been collected and reared from the stalks of *Solidago* sp. in Washington by J.F.G. Clarke in 1935 (Cashatt 1972). Glenn told E.D.C. that he collected this species along an abandoned railroad bed. The area to which he was referring probably lay just west of Broadus Station on the old Henry Branch (Figures 1 and 5). This area was pointed out to us by Glenn's daughter, Marjorie E. Haws, and by our colleague, R.R. Irwin.

*O. homodactylus* (Walker): June 4, 26; August 9. Reared: *Aster* sp.; issued June 8, 12. *Solidago canadensis* L.; issued June 23, 25, 27. Goldenrod [*Solidago* sp.]; issued June 14.

*O. inquinatus* Zeller: May 20, 26, 30; June 20, 23, 25; July 1, 2, 13, 17, 18, 23; August 5, 20; September 3, 5, 7, 23; November [date not given].

*O. kellicottii* "complex": July 7, 16.

*O. lacteodactylus* (Chambers): June 4; July 8, 11. Reared: *Eupatorium perfoliatum* L.; issued June 23, 24.

*O. paleaceus* (Zeller): April 15; June 6, 13, 24, 28, 29; July 22; August 5, 13. Reared: *Vernonia missurica* Raf. [labeled "*Vernonia illinoensis*"]; issued July 23, 24; August 28, 29.

**PLATYPTILIA** Hübner

*P. carduidactyla* (Riley): April 21; May 3, 6, 8, 22, 29; June 1, 10, 15; July 27, 30; August 30; September 5. Reared: Thistle [*Cirsium* sp.]; issued July 13, 18, 22; August 5, 6.

*P. pallidactyla* (Haworth): May 29, 30; June 1, 5, 7, 9(1952, 1960, 1967), 17, 20.

**STENOPTILODES** Zimmerman

*S. auriga* (Barnes & Lindsey): May 28; June 2–4, 9. Reared: *Gerardia* sp. (false foxglove); issued May 25, 27, 28; June 4, 9, 11.

*S. edwardsii* (Fish): June 13; July 15; September 4.

**TRICHOPTILUS** Walsingham

*T. lobidactylus* (Fitch): June 11, 15, 17, 18(1974, 1975), 19, 24, 28; July 1, 2. Reared: *Solidago* sp.; issued June 14–16, 18, 21, 23.

## 29. PYRALIDAE

**ACHROIA** Hübner

*A. grisella* (Fabricius): July 19; August 10, 14, 19, 26; September 23, 28.

**ACHYRA** Guenée

*A. rantis* (Guenée): August 3, 11; September 5, 10, 11, 12, 20, 28, 30; October 4.

**ACROBASIS** Zeller

*A. angusella* Grote: June 21, 22, 28; July 8, 12, 20, 25, 26, 28, 30, 31; August 1, 3, 23(1950, 1960), 25, 26. Reared: *Juglans cinerea* L. (larva in shoots); issued July 4. *Juglans* sp. (larva in shoots); issued June 23.

*A. aurorella* Ely: June 7, 26; August 16, 26, 27.

*A. caryae* Grote: June 18, 24; July 10, 19(1939, 1968), 20, 23, 28, 29, 30(1939, 1970, 1975); August 2, 3, 9, 12–14, 18, 30; September 9. Reared: *Carya glabra* (Mill.) Sweet; issued June 29; July 4. *Carya ovata* (Mill.) K. Koch (larva boring in new shoots); issued July 2.

*A. caryivorella* Ragonot: July 29; August 1.

*A. coryliella* Dyar: July 6, 9, 10, 15, 19, 25, 26. Reared: *Corylus americana* Walt.; issued June 11, 20, 27, 28.

*A. demotella* Grote: May 19, 23, 26, 29; June 1–6, 9, 10, 12, 14, 25, 29; July 22. Reared: *Carya* sp.; issued June 3, 7.

*A. feltella* Dyar: June 18, 22, 23, 24(1963, 1967), 28; July 9, 12, 13(1950, 1957, 1960), 16, 27. Reared: *Carya* sp. (larva on leaves); issued June 25, 26, 28 (larva in cocoon case on leaf); July 3, 4.

*A. indigenella* (Zeller): June 3, 13, 15(1963, 1968), 18, 21, 25; July 11, 19; August 5, 10, 18, 30; September 12. Reared: *Crataegus* sp.; issued June 20, 25.

*A. juglandis* (LeBaron): June 17, 29; July 1, 11, 19. Reared: *Juglans* sp. (larvae on leaves); issued June 24, 30; July 2(1955, 1960), 5 (larva in cocoonlike case), 10, 16.

*A. kearfottella* Dyar: June 17, 20, 22, 23, 28(1962, 1975), 30(1953, 1955, 1976); July 2(1956, 1976), 7, 8. Reared: *Carya* sp.; issued June 21. *Carya cordiformis* (Wangenh.) K. Koch (larva in case on leaf); issued June 24.

*A. latifasciella* Dyar: August 16; September 9. Reared: *Juglans* sp.; issued June 23, 27.

*A. normella* Dyar: July 28.



*A. palliolella* Ragonot: July 1, 11, 13, 26, 28.

*A. peplifera* Dyar: June 1, 12; July 28. Reared: *Carya* sp.; issued July 23.

*A. secundella* Ely: June 30; July 12(1959, 1963), 15, 18, 25, 27, 30; August 10, 17. Reared: *Corylus americana* Walt.; issued June 15; July 14, 24, 26, 29.

*A. stigmella* Dyar: July 11, 25, 31; August 5, 15, 20. Reared: *Carya ovata* (Mill.) K. Koch (in buds); issued June 8, 16, 18.

*A. sylviella* Ely: June 8; July 11. Reared: *Ostrya virginiana* (Mill.) K. Koch; issued June 1, 17, 18.

#### **ADELPHIA** Heinrich

*A. petrella* (Zeller): June 30.

#### **AETHIOPHYSA** Munroe

*A. lentifualis* (Zeller): July 1, 6, 7(1940, 1967), 9(1941, 1949), 10, 16, 20, 29; August 30; September 3.

#### **AGLOSSA** Latreille

*A. cuprina* Zeller: June 13, 14; July 1, 2, 6, 11, 25, 26, 28, 29; August 5, 10, 14.

#### **AGRIPHILA** Hübner

*A. ruricolella* (Zeller): August 23, 27, 29(1969, 1971), 30, 31; September 1(1971, 1976).

*A. vulgivagella* (Clemens): September 5, 12–14, 16, 19, 23.

#### **ANAGASTA** Heinrich

*A. kuehniella* (Zeller): January 16; April 23; May 12, 23; June 4, 6; July 18(1965, 1975); August 6, 27, 28; September 14.

#### **ANAGESHNA** Munroe

*A. primordialis* (Dyar): June 2, 7, 8, 10, 13, 23; July 4; August 15, 29.

#### **APHOMIA** Hübner

*A. sociella* (Linnaeus): August 21.

*A. terrenella* Zeller: June 10, 13, 21; July 1, 5, 9, 19, 20, 29, 30; August 28.

#### **APOGESHNA** Munroe

*A. stenialis* (Guenée): May 28; June 13, 18, 21, 24, 25, 30.

#### **AREQUIPA** Walker

*A. turbatella* Walker: July 3, 6, 9, 31; August 11.

#### **ARTA** Grote

*A. statalis* Grote: June 27; July 8, 9, 10(1937, 1939), 11, 12, 14, 19, 22(1964, 1966, 1969), 30; August 2(1947, 1971).

#### **ATASCOSA** Hulst

*A. glareosella* (Zeller): August 7.

#### **BLEPHAROMASTIX** Lederer

*B. ranalis* (Guenée): May 30; June 6, 8, 19, 22, 30.

#### **CANARSIA** Hulst

*C. ulmiarrosorella* (Clemens): May 3, 8, 13, 17, 19, 22, 23, 25, 28; June 3, 11, 12, 17, 23, 26(1963, 1964); July 2, 4, 19; August 14(1939, 1969), 15, 18.

#### **CAUDELLIA** Dyar

*C. albovittella* Dyar: September 3, 6.

#### **CHALCOELA** Zeller

*C. iphitalis* (Walker): May 31; June 13; August 9, 29, 31; September 1.

#### **CHRYNOTEUCHIA** Hübner

*C. topiaria* (Zeller): June 16, 20, 29; July 2, 8, 25, 28, 31; August 1, 8.

#### **COMPACTA** Amsel

*C. capitalis* (Grote): June 5, 9, 25; July 2, 5.

#### **CONCHYLODES** Guenée

*C. ovulalis* (Guenée): June 21.

#### **CONDYLOLOMIA** Grote

*C. participalis* Grote: June 15(1945, 1962), 17, 21, 23, 24(1965, 1973), 26(1964, 1972, 1976), 28–30; July 1, 2, 6, 7, 15.

#### **CRAMBUS** Fabricius

*C. agitatellus* Clemens: June 9, 11, 12, 14, 15(1936, 1963), 19, 21, 25(1939, 1966), 30(1953, 1974); July 6, 8–11, 14, 17, 19, 20(1935, 1975), 21, 25, 28; August 7.

*C. albellus* Clemens: June 5, 10, 13(1939, 1976), 14–16, 17(1964, 1971), 19, 20(1937, 1969), 22, 24–26, 28, 30.

*C. caliginosellus* Clemens: July 7, 9, 12, 15, 17, 20, 23(1972, 1975); August 1, 10(1973, 1976).

*C. girardellus* Clemens: June 11, 24, 25, 27; July 1, 5, 9, 12, 15, 18, 19, 31; August 31; September 3.

*C. laqueatellus* Clemens: May 17, 20, 22, 23, 25, 29, 30(1950, 1953), 31; June 5, 6(1953, 1966), 7, 8, 25, 30.

*C. leachellus* (Zincken): June 3, 24; September 5, 12, 15(1940, 1945, 1962), 17, 18, 22, 27, 30; October 1.

*C. luteolellus* Clemens: June 9; July 1, 6, 11, 14, 17, 18(1973, 1974), 22, 26.

*C. murellus* Dyar: May 29, 30; June 4, 6, 7, 9, 13, 16, 18.

*C. praefectellus* (Zincken): May 23, 24, 27; June 6; August 7; September 6, 13, 19.

**CROCIDOPHORA** Lederer

*C. serratissimalis* Zeller: June 20, 28; July 6, 24; August 16, 21, 23.

*C. tubercularis* Lederer: May 22; June 13, 14(1940, 1953, 1967), 18, 19, 21, 25, 30.

**DESMIA** Westwood

*D. funeralis* (Hübner): May 20, 24; June 30; August 15, 22; September 2. Reared: *Parthenocissus quinquefolia* (L.) Planch. [labeled "*Psedera quinquefolia*"]; issued August 5.

**DIACME** Warren

*D. elealis* (Walker): July 9; August 5, 10, 18, 26.

**DIAPHANIA** Hübner

*D. hyalinata* (Linnaeus): September 16, 19, 20; October 5(1936, 1946), 30.

*D. nitidalis* (Stoll): August 15; September 20; October 15, 25.

**DIASTICTIS** Hübner

*D. ventralis* (Grote & Robinson): April 26; May 3, 7, 8(1934, 1936), 10, 17(1934, 1972), 19–22, 27; June 3, 4, 8, 25, 27; July 16, 20, 26; August 12, 24; September 14, 19.

**DICYMOLOMIA** Zeller

*D. julianalis* (Walker): May 29; June 5, 15, 18, 28–30; July 1, 12, 15, 31; August 9, 13, 18, 23, 26, 27, 29, 31; September 7, 28.

**DIORYCTRIA** Zeller

*D. abietivorella* (Grote): July 17(1974, 1975); August 2, 14.

**DONACAULA** Meyrick

*D. amblyptepennis* (Dyar): June 12, 20; July 31; August 6.

*D. longirostrella* (Clemens): June 2(1938, 1958, 1966), 6; July 12.

*D. melinella* (Clemens): June 20, 24, 25; July 26, 28; August 4, 7, 13(1970, 1972).

*D. tripunctella* (Robinson): June 12, 25, 26(1936, 1944).

*D. unipunctella* (Robinson): June 18.

**ELASMOPALPUS** Blanchard

*E. lignosellus* (Zeller): July 17(1962, 1970); August 9, 24, 29, 30.

**EOREUMA** Ely

*E. densella* (Zeller): May 31(1963, 1965); June 5, 6, 9, 12, 17, 25, 29, 30; July 3, 8.

**EPHESTIA** Guenée

*E. elutella* (Hübner): June 4, 7, 16, 25, 30; July 12; August 3, 7, 9, 19, 21, 28; October 3, 15; November 11.

**EPHESTIODES** Ragonot

*E. erythrella* Ragonot: June 12, 20.

*E. infimella* Ragonot: May 17, 27; June 2, 4, 6; July 7, 26, 31; August 5, 17, 22, 26, 27; September 1, 10; October 20.

**EPIPAGIS** Hübner

*E. huronalis* (Guenée): August 13.

**EPIPASCHIA** Clemens

*E. superatalis* Clemens: June 7–9, 11, 22, 23, 25, 26, 30; July 2(1966, 1974), 4, 15, 16; August 5. Reared: *Rhus radicans* L.; issued June 17.

*E. zelleri* (Grote): June 2, 15, 19, 20, 30; July 2, 10, 20, 31.

**ERELIEVA** Heinrich

*E. parvulella* (Ely): June 24; July 3, 8, 17, 18, 25(1974, 1975).

**ETIELLA** Zeller

*E. zinckenella* (Treitschke): October 30.

**EUCHROMIUS** Guenée

*E. ocellus* (Haworth): May 3; August 21, 23; November 1.

**EULOGIA** Heinrich

*E. ochrifrontella* (Zeller): May 16, 24; June 1, 3, 5, 6, 8; July 28; August 5, 14(1961, 1967), 19, 21; September 6; October 10.

**EURYTHMIA** Ragonot

*E. fumella* Ely: June 24(1963, 1965), 26, 28(1946, 1962), 30; August 18; September 2.

*E. hospitella* (Zeller): June 11, 19, 24(1963, 1965, 1973), 25; July 1, 2(1964, 1966, 1975), 14; August 5, 15, 24, 27(1965, 1974).

**EUSTIXIA** Hübner

*E. pupula* Hübner: June 3, 18(1974, 1976), 19; July 22, 30; August 12, 25.

**EUZOPHERA** Zeller

*E. semifuneralis* (Walker): May 7, 14, 16, 22, 30; June 23, 25, 30; July 5, 20, 23; August 29; September 8, 12.



**EVERGESTIS** Hübner

*E. pallidata* (Hufnagel): May 20, 25; August 28(1941, 1975); September 17, 24.

*E. unimacula* (Grote & Robinson): June 2, 6, 13; July 10, 26, 31; August 2, 7, 9, 12, 15(1954, 1968), 18, 26; September 12.

**FISSICRAMBUS** Bleszynski

*F. mutabilis* (Clemens): June 6, 9, 11, 13(1974, 1976), 20; July 25, 30, 31; August 16, 26.

**FRAMINGHAMIA** Strand

*F. helvalis* (Walker): June 12; July 1, 8, 20. Reared: *Populus deltoides* Marsh.; issued July 23.

**FRECHINIA** Munroe

*F. helianthiales* (Murtfeldt): May 2, 6, 20(1934, 1939), 22, 26; June 3(1937, 1955), 4; July 17, 20, 25; August 3.

**FUMIBOTYS** Munroe

*F. fumalis* (Guenée): August 5, 15, 17(1968, 1975), 19, 20, 23(1950, 1967), 24; September 3, 5.

**GALASA** Walker

*G. nigrinodis* (Zeller): June 29, 30; July 15, 21, 22, 27, 28, 30; August 6; September 12.

**GALLERIA** Fabricius

*G. mellonella* (Linnaeus): August 1, 6; September 5, 24, 30.

**GLAPHYRIA** Hübner

*G. fulminalis* (Lederer): May 31; June 1, 12, 17, 20, 24; July 6–8, 9(1941, 1955), 11, 12(1944, 1968), 14, 17, 21, 23, 25(1950, 1958), 29; August 5(1947, 1950), 6, 7, 18, 19, 21(1943, 1965).

*G. glaphyralis* (Guenée): June 18, 20, 24, 26, 28, 30; July 2–4, 8, 10, 12, 15(1945, 1965), 18, 19, 26, 27, 31.

*G. sequestrialis* Hübner: July 1, 9, 17, 31; August 25; September 4, 12.

**GLYPTOCERA** Ragonot

*G. consobrinella* (Zeller): May 20(1962, 1963); June 1, 9, 14, 17, 18, 20, 22(1962, 1976), 30(1964, 1974); July 2, 3, 6(1965, 1974), 28.

**HAHNCAPPSIA** Munroe

*H. mancalis* (Lederer): June 23; July 6, 15; August 3, 10, 27.

*H. marculenta* (Grote & Robinson): May 18–20, 25, 30; June 6, 15, 30; July 1, 6, 8, 19, 28; August 2, 21, 24, 29; September 12, 14.

**HELLULA** Guenée

*H. rogatalis* (Hulst): September 22, 23.

**HELVIBOTYS** Munroe

*H. helvialis* (Walker): August 12; September 10.

**HERCULIA** Walker

*H. intermediaris* (Walker): June 17, 21, 22, 28; July 1, 3, 4, 7, 11, 14, 18; August 1–3, 12, 13.

*H. olinalis* (Guenée): May 31; June 2, 4, 15, 20(1937, 1975), 22; July 25; August 29; September 4, 25; October 3.

**HERPETOGRAMMA** Lederer

*H. abdominalis* (Zeller): June 5, 8; July 3, 4; August 22.

*H. aeglealis* (Walker): June 26, 27, 30; July 2(1963, 1965), 3, 4, 7, 12, 14, 17, 20.

*H. bipunctalis* (Fabricius): July 18; August 25, 29; September 1, 2, 9, 16, 20, 30; October 5.

*H. pertextalis* (Lederer): June 6, 10; July 28; August 5, 24, 26; September 1, 2. Reared: *Antennaria plantaginifolia* (L.) Hook.; issued June 9. *Aster* sp.; issued June 3. *Fragaria virginiana* Duch.; issued June 4. *Ranunculus* sp.; issued May 26. *Sanicula canadensis* L.; issued July 2. *Urtica* sp.; issued October 2, 29. *Veronicastrum virginicum* (L.) Farwell [labeled "Veronica virginica"]; issued July 5.

*H. thestealis* (Walker): June 20; July 11.

**HOMOEOSOMA** Curtis

*H. electellum* (Hulst): May 10, 19, 20; June 9, 10; July 1, 13; August 1, 5, 10, 16; October 20.

*H. stypticellum* Grote: May 10; June 9; July 27; August 2, 8, 9, 11(1956, 1962), 12, 14, 17, 20, 22, 23, 29.

**HULSTIA** Ragonot

*H. undulatella* (Clemens): August 5, 6; September 10.

**HYMENIA** Hübner

*H. perspectalis* (Hübner): June 21; July 19; August 9, 16, 22, 27; September 5(1945, 1968), 6, 8, 23, 26, 29, 30; October 2, 4, 6, 20.

**HYPSOPYGIA** Hübner

*H. costalis* (Fabricius): June 3, 11, 25, 28, 30; September 1, 14; October 3, 11.

**IMMYRLA** Dyar

*I. nigrovittella* Dyar: May 9, 14, 15, 28; June 1, 4, 5, 9, 18.

**LINEODES** Guenée

*L. integra* (Zeller): March [no date]; July 5, August 13–15, 22, 24, 25, 31; September 6, 22.

**LIPOCOSMA** Lederer

*L. sicalis* (Walker): June 7, 9(1941, 1946), 10, 14, 16, 23, 26; August 10, 19.

**LIPOCOSMODES** Munroe

*L. fuliginosalis* (Fernald): June 4, 12, 18, 22, 26; August 10, 16, 20, 21, 22, 24; September 13.

**LOXOSTEGE** Hübner

*L. commixtalis* (Walker): May 6, 7, 10, 27; August 24, 31; September 8, 14.

*L. sticticalis* (Linnaeus): June 30; July 17.

**LOXOSTEGOPSIS** Dyar

*L. merrickalis* (Barnes & McDunnough): June 28; July 2, 3(1944, 1954), 5(1949, 1965), 9(1943, 1957), 17–19, 24, 26, 31.

**LYGROPIA** Lederer

*L. rivulalis* Hampson: June 4, 30; August 2, 15, 22; September 6.

**MACROTHERCA** Ragonot

*M. unipuncta* Dyar: May 19; June 6, 17(1956, 1968), 24(1955, 1966); July 7, 10, 14.

**MEROPTERA** Grote

*M. abditiva* Heinrich: May 20, 25, 28; June 1(1961, 1965); August 13, 26.

*M. cviatella* Dyar: June 4, 9, 23, 28; July 8; August 26; September 3. Reared: *Amorpha canescens* Pursh; issued July 16. *Lycopus americanus* Muhl.; issued June 7, 8. *Populus deltoides* Marsh. (in buds and new shoots); issued August 12.

*M. pravella* (Grote): June 4, 18, 28; July 15(1965, 1967); August 30. Reared: *Salix* sp.; issued July 30. *Rhus typhina* L.; issued June 17, 20.

**MICROCRAMBUS** Bleszynski

*M. biguttellus* (Forbes): June 26, 28, 30(1970, 1974); July 1, 2(1963, 1974, 1975), 3, 5, 7, 8, 10–13, 18, 28; August 10, 27, 30, 31; September 3, 9.

*M. elegans* (Clemens): June 10, 22, 24, 28(1936, 1952); July 18, 23, 26; August 2, 6, 12; September 10.

*M. minor* (Forbes): June 16, 17, 20, 23(1962, 1964), 25, 26(1963, 1976), 28(1965, 1975), 29, 30(1967, 1968); July 1(1956, 1970), 2, 6, 9(1961, 1970), 12, 24.

**MICROTHERIS** Meyrick

*M. ophionalis* (Walker): August 7.

**MOODNA** Hulst

*M. ostrinella* (Clemens): May 2, 15, 19; June 2, 7, 18, 19; July 8; August 10, 28; September 6, 8, 20. Reared: *Rhus glabra* L. (seed heads); issued April 25; September 8.

**MUNROESSA** Lange

*M. gyalis* (Hulst): July 27; August 18; September 6, 12, 19.

*M. icciusalis* (Walker): July 24; August 23.

**MUTUURAIA** Munroe

*M. mysippusalis* (Walker): May 2.

**MYELOPSIS** Heinrich

*M. coniella* (Ragonot): June 4.

*M. subtetricella* (Ragonot): April 29; May 2, 3, 6(1965, 1966), 7(1941, 1970), 10, 12(1941, 1950), 13, 17(1965, 1967, 1972); June 14; July 25; August 18.

**NASCIA** Curtis

*N. acutella* (Walker): June 11, 14, 23; July 11; August 18, 27.

**NEPHOPTERIX** Hübner

*N. basilaris* Zeller: May 24; June 4, 11, 25; August 6, 8, 11, 15.

*N. celtidella* (Hulst): May 11, 17; June 30; July 8, 23; August 6, 11; September 1. Reared: *Celtis occidentalis* L.; issued June 9.

*N. dammersi* Heinrich: June 2(1965, 1966), 3, 4, 9, 18, 19, 20(1974, 1975), 21(1952, 1975), 24, 28; July 2, 5, 12, 21(1952, 1961), 24; September 7. Reared: *Amorpha fruticosa* L.; issued August 2.

*N. rubrisparsella* (Ragonot): May 14, 29, 31; June 4, 9, 12, 13, 15, 17, 27(1937, 1972), 30; July 3, 10, 11, 19, 24; August 2, 5, 7(1948, 1959), 10, 15, 27; September 10; October 11.

*N. subcaesiella* (Clemens): May 22, 26, 29; June 2, 3(1960, 1965, 1975), 10, 12, 17(1946, 1952), 20, 23, 28; July 2, 27; August 9, 14.

*N. subfuscella* (Ragonot): June 20. Reared: *Rhus typhina* L.; issued June 17, 26.

*N. vestusella* (Dyar): May 6(1949, 1972), 10, 16, 20; June 3, 9(1964, 1965), 20, 24, 26, 27; July 23, 28, 31; August 3(1961, 1973), 22, 24.

*N. virgatella* (Clemens): May 22; June 2, 8, 10, 14, 17, 21; August 7, 11; September 6. Reared: *Robinia pseudo-acacia* L.; issued May 10.

**NEPHROGRAMMA** Munroe

*N. reniculalis* (Zeller): June 25; July 1; August 8(1949, 1973), 12–16, 18, 22, 23, 27; September 13.

**NOMOPHILA** Hübner

*N. nearctica* Munroe: May 2; June 4, 16; July 16, 28; August 17; September 15.

**OMPHALOCERA** Lederer

*O. cariosa* Lederer: June 23; July 1, 3, 15.



**ONEIDA** Hulst

*O. lunulalis* (Hulst): June 3, 5, 20, 23, 26, 28; July 1, 7, 17, 22, 25; August 18.

**OREANA** Hulst

*O. unicolorella* (Hulst): May 23; June 5, 7, 13, 18, 20, 23, 29, 30(1961, 1976); July 7, 10(1963, 1964), 12(1959, 1963), 28; August 5, 10, 12, 17.

**ORTHOLEPIS** Ragonot

*O. pasadamia* (Dyar): June 13; July 11.

**OSTRINIA** Hübner

*O. nubilalis* (Hübner): June 13, 20; July 25(1942, 1975); August 5, 12(1942, 1975), 15, 16; September 3, 16.

*O. obumbratalis* (Lederer): May 19, 25; June 16; August 15, 27; September 1, 19. Reared: *Polygonum* sp. (boring in stem); issued May 16 (overwintered as a larva); June 24.

*O. penitalis* (Grote): June 1, 9, 18; July 5, 10; August 3, 4, 10, 15, 28(1940, 1962); September 3. Reared: *Nelumbo lutea* (Willd.) Pers. (stem borer); issued September 14.

**PALPITA** Hübner

*P. aenescentalis* Munroe: April 5, 13, 17, 23, 29. Notes. All paratypes.

*P. cincinnatalis* Munroe: April 20, 27, 28; May 3, 22, 28(1967, 1969); June 1, 4, 5, 7, 20; July 9, 22, 25(1967, 1972), 27–29; August 1, 11, 13, 16–18, 21.

*P. magniferalis* (Walker): April 4, 26, 28; May 6, 7, 28, 30; June 9, 14, 20; July 2(1970, 1975), 7, 9–11, 15, 17, 20, 24, 25(1955, 1970), 28; August 1, 10, 28(1945, 1975); September 7.

**PANTOGRAPHIA** Lederer

*P. limata* (Grote & Robinson): June 16, 23(1934, 1940), 28; July 3, 9.

**PARAPEDIASIA** Bleszynski

*P. decorella* (Zincken): June 19, 21, 26; July 1, 2, 5; August 1, 18.

*P. teterrella* (Zincken): June 1, 7, 21; July 21, 25, 26, 30; August 5, 6, 10, 14, 30; September 14.

**PARAPOYNX** Hübner

*P. badiusalis* (Walker): July 21; August 13, 17, 18, 21, 27; September 4.

*P. obscuralis* (Grote): August 24, 27–29; September 1.

**PEDIASIA** Hübner

*P. laciniella* (Grote): October 11.

*P. trisecta* (Walker): May 23, 24, 26, 27; June 3, 9, 10; July 5, 7, 20, 21, 26, 30(1933, 1972); August 1, 5–7, 17(1969, 1975); September 5, 17, 23, 29; October 20.

**PEORIA** Ragonot

*P. approximella* (Walker): May 30, 31; June 4, 5, 8, 17, 18, 19(1965, 1966), 21(1933, 1954, 1965), 23, 25; July 1, 13, 15, 16, 19–21, 23, 24; September 2.

*P. bipartitella* Ragonot: August 1, 3, 6, 12, 14, 26, 27(1965, 1974), 29; September 4, 9.

*P. gemmatella* (Hulst): May 8; July 9, 25; August 16, 17, 20.

*P. tetradella* (Zeller): June 23–25, 29; July 1, 2, 3(1969, 1973), 5, 7, 10, 12–14, 17, 18, 30; August 6.

**PERISPASTA** Zeller

*P. caeculalis* Zeller: May 3, 4, 6, 10, 16–18, 28; June 13; July 18–20, 22; August 6, 16(1936, 1972), 17; September 1, 5, 14.

**PETROPHILA** Guilding

*P. bifascialis* (Robinson): August 18; September 2, 5(1936, 1948).

**PHLYCTAENIA** Hübner

*P. coronata tertialis* (Guenée): May 17, 28; June 3, 5, 25; July 30; August 10, 11, 13(1945, 1974), 15(1938, 1974), 23, 25; September 7.

**PHYCITODES** Hampson

*P. albatella mucidella* (Ragonot): May 8, 15, 16(1954, 1962), 20, 21, 28; June 2(1940, 1966), 4(1968, 1976), 5, 8, 12(1953, 1961), 13(1950, 1976), 25, 30; July 1; August 5, 25, 30; September 5, 14, 18(1965, 1974).

**PILOCROCIS** Lederer

*P. ramentalis* Lederer: August 19; September 1, 6, 9, 20.

**PLATYTES** Guenée

*P. vobisne* Dyar: June 4, 11, 14, 21(1973, 1975), 23(1956, 1964, 1968), 28.

**PLEUROPTYA** Meyrick

*P. silicalis* (Guenée): August 9, 10; September 12, 22; October 16. Reared: *Boehmeria cylindrica* (L.) Sw. (leaf roller); issued March 5; September 22; October 3.

**PLODIA** Guenée

*P. interpunctella* (Hübner): February 13; March 12; April 5, 6, 8; May 1, 29; August 22; September 15; October 10, 14. Reared: Dried sweet corn [*Zea mays* L.]; issued March 6.

**POLYGRAMMODES** Guenée

*P. flavidalis* (Guenée): June 16, 30; July 3, 9, 11(1953, 1963), 19, 20, 27, 30, 31; August 12, 23.

**PSOROSINA** Dyar

*P. hammondi* (Riley): May 16; June 3–6, 23, 24(1933, 1956), 25, 29, 30; July 9, 19; August 6, 9, 17. Reared: Crab apple [*Malus coronaria* (L.) Mill.]; issued April 25.

**PYLA** Grote

*P. fusca* (Haworth): August 21; September 26.

**PYRALIS** Linnaeus

*P. disciferalis* Dyar: June 4, 9, 22, 24, 28; July 1, 6, 7, 18, 19(1968, 1976), 24; August 10, 12(1965, 1975); September 4.

*P. farinalis* Linnaeus: June 16; July 7; August 2.

**PYRAUSTA** Schranck

*P. acronialis* (Walker): May 6(1949, 1966), 3(1963, 1965), 20, 21, 25; June 10, 27, 28; July 12, 25; August 5, 7, 9, 14, 17, 28(1973, 1976), 29; September 3, 7.

*P. bicoloralis* (Guenée): May 20; July 15, 23; August 16, 27; September 10(1932, 1974).

*P. inveterascalis* Barnes & McDunnough: June 3, 10, 12, 15, 16, 20, 29, 30(1953, 1968); July 5, 8–10, 18, 31.

*P. laticlavata* (Grote & Robinson): September 24; October 3.

*P. onythesalis* (Walker): June 8, 17; August 12, 21, 22, 29; September 5.

*P. orphisalis* Walker: April 30; May 11, 14, 15, 31; June 1, 2, 20, 24; July 15, 18, 20, 28, 29; August 7, 10, 21, 24, 25(1948, 1973), 31; September 1, 13. Reared: *Agastache nepetoides* (L.) Kuntze; issued June 2. *Blephilia hirsuta* (Pursh) Benth.; issued May 17; July 22, 29. *Teucrium canadense* L.; issued July 29.

*P. signatalis* (Walker): May 8, 16, 18, 21; June 7; July 4–6, 8, 22.

*P. subsequalis* (Guenée): April 27; May 3; June 20; July 17, 26, 28, 30(1938, 1940); August 2, 31; September 5, 8.

*P. tyralis* (Guenée): June 26; August 8, 20; September 11.

**RAPHIPTERA** Hampson

*R. argillaceella minimella* (Robinson): August 6.

**SALEBRIARIA** Heinrich

*S. annulosella* (Ragonot): June 6, 7, 26, 30; July 15, 26.

*S. engeli* (Dyar): May 27; June 8, 16, 17, 20; July 6, 7, 12(1962, 1963), 21, 30, 31; August 2, 3, 10. Reared: Oak [*Quercus* sp.]; issued June 27.

*S. nubiferella* (Ragonot): June 1, 11, 18; July 2(1950, 1974), 8, 11, 14, 22; August 7, 17.

*S. tenebrosella* (Hulst): May 14, 30, 31; June 4(1966, 1968), 7, 9, 17, 21, 26, 30; July 1, 2, 6, 11, 12(1963, 1972–1974), 16–18; August 5.

*S. turpidella* (Ragonot): July 8.

**SAUCROBOTYS** Munroe

*S. fumoferalis* (Hulst): May 31; June 21; August 1, 3, 6, 10(1932, 1973), 17, 19, 21.

*S. futilalis* (Lederer): June 12, 16, 19; July 30; August 13; September 10. Reared: *Apocynum androsaemifolium* L. ("social in web"); issued June 9, 17, 25; September 2.

**SCOPARIA** Haworth

*S. basalis* Walker: June 4, 9, 16; August 12, 18, 22, 27(1939, 1956), 30; September 6.

**SERICOPLAGA** Warren

*S. externalis* Warren: May 28; June 2, 14; July 11; August 2, 11(1938, 1974), 22, 27.

**SITOTCHROA** Hübner

*S. chortalis* (Grote): May 2, 4, 11, 20, 23, 27, 28; June 2, 30; July 6.

*S. dasconalis* (Walker): June 10, 13, 25, 26(1932, 1936); July 1.

**SPOLADEA** Guenée

*S. recurvalis* (Fabricius): September 16; October 30; November 2.

**STEGEA** Munroe

*S. eripalis* (Grote): June 28; July 2, 6–8, 10(1948, 1950), 11, 12(1945, 1972), 15–17.

**SYNCLITA** Lederer

*S. oblitalis* (Walker): June 6; July 9, 12, 16, 25; August 9, 14, 21, 24, 25, 27, 28; September 3, 10, 12.

**TAMPA** Ragonot

*T. dimediatella* Ragonot: June 21.

**TELETHUSIA** Heinrich

*T. ovalis* (Packard): June 17, 20(1957, 1962), 22, 24, 26, 29; July 20.

**TETRALOPHA** Zeller

*T. asperatella* (Clemens): May 16, 20, 25; June 2(1942, 1966), 8, 9, 11, 14, 15, 18, 24(1962, 1964), 25, 30; July 2, 8, 10, 20; August 7, 8, 20. Reared: Hard maple [*Acer saccharum* Marsh.]; issued June 4, 9 (wintered as pupae).

*T. baptisiella* Fernald: May 23, 29, 30; September 2. Reared: *Amorpha canescens* Pursh; issued June 25, 28; July 19. *Amorpha fruticosa* L.; issued July 19, 23.

*T. humerella* Ragonot: May 3, 6, 16, 18, 20(1944, 1976), 29, 30; June 5, 7, 9(1956, 1975), 13, 15, 16, 22, 30; July 26(1941, 1974), 27; August 5.

*T. maritimalis* McDunnough: May 24; June 15, 17, 18; July 4, 12, 31; August 10.



*T. militella* Zeller: May 24; June 27; August 20. Reared: sycamore [*Platanus occidentalis* L.]; issued August 2, 10.

### **THAUMATOPSIS** Morrison

*T. pexella* (Zeller): September 5, 6, 8, 9, 10(1962, 1963), 11, 12, 14, 15, 17(1964, 1967), 19.

### **THOPEUTIS** Hübner

*T. forbesellus* (Fernald): July 10, 20.

### **TLASCALA** Hulst

*T. reductella* (Walker): May 3, 8, 10, 15–17, 20, 21, 25(1932, 1966), 30; June 9, 15; July 6(1957, 1974), 9, 19; August 20, 21. Reared: *Gleditsia* sp.; issued June 8.

### **TOSALE** Walker

*T. oviplagalis* (Walker): May 25; June 4, 11, 16, 18, 23, 24, 27; July 2, 3, 8, 12, 15, 20; August 10, 27.

### **UDEA** Guenée

*U. rubigalis* (Guenée): April 30; May 22; June 6, 11, 25; July 25, 28; September 1, 10, 25, 30; October 3.

### **URESIPHITA** Hübner

*U. reversalis* (Guenée): June 23; July 8; August 13, 18; September 11, 14, 22.

### **UROLA** Walker

*U. nivalis* (Drury): June 15(1934, 1935); August 6, 15–17, 29.

### **VARNERIA** Dyar

*V. postremella* Dyar: June 20(1953, 1962), 23, 24, 25(1944, 1973), 26(1965, 1966), 29, 30(1946, 1965); July 2, 4–6, 8, 12.

### **VAXI** Bleszynski

*V. auratella* (Clemens): June 23, 28; July 8, 11, 16, 17.

### **VITULA** Ragonot

*V. edmandsii* (Packard): June 4(1953, 1964, 1967), 22; July 7, 15, 24, 28; August 12, 13, 15(1954, 1974), 17, 18, 20(1965, 1973), 23, 25(1967, 1973); September 6, 8, 12, 13, 15, 19.

### **XANTHOPHYSA** Munroe

*X. psychialis* (Hulst): June 16, 24; July 8, 10, 17, 31; August 11, 16; September 2, 3.

### **ZOPHODIA** Hübner

*Z. convolutella* (Hübner): April 2, 20, 24, 27, 29(1951, 1955); May 3, 14, 25. Reared: Gooseberry [*Ribes* sp.] (in fruit); issued April 22; May 2.

## 30. SCYTHRIDIDAE

Entries for the Scythrididae include data from material that Glenn deposited in the USNM (courtesy of J.-F. Landry) and at the INHS.

### **SCYTHRIS** Hübner

*S. basilaris* (Zeller): June 2, 7(1941, 1964), 13, 14, 16, 19(1944, 1949), 20(1937, 1963); July 1.

*S. graminivorella* (Braun): June 16, 26, 27, 30.

*S. impositella* (Zeller): May 22; June 7, 11, 12; August 24, 25.

*S. limbella* (Fabricius): May 20, 22, 25, 26; June 2, 9; July 1, 7, 12, 14, 16, 17, 25, 28, 30; August 2, 10, 11, 13, 17(1970, 1973), 20, 26, 29, 31. Notes. J.-F. Landry in a letter (September 9, 1986) to S. Passoa stated that this is a European species apparently introduced into eastern North America in the 1950s. *S. limbella* was first collected in the Marshall-Putnam county area on July 16, 1967.

*S. matutella* (Clemens): May 5, 14, 24; June 1, 4, 11(1956, 1966); July 1, 22, 25–27, 29; August 4, 6(1964, 1969, 1970), 7–9, 10(1970, 1973), 13, 15(1967, 1975), 18(1969, 1972), 22, 29. Reared: *Aster* sp.; issued March 8 (reared indoors). Notes. Landry (pers. comm.) stated that the *Aster*-association is "quite surprising because the usual hostplant is *Helianthus*. Asters are the usual host of the related *impositella*. Either *matutella* uses hostplants other than sunflowers, or the specimen was mislabelled. . . ."

*S. trivinctella* (Zeller): May 18, 19, 23, 30; June 10, 11, 20, 30; July 5, 25; August 3, 9, 20, 29; September 5, 18; October 3, 12, 18; November 30.

*S.* undescribed sp. near *eboracensis* (Zeller): June 3, 4, 6, 14, 22.

*S.* undescribed sp. near *ochristriata* (Walsingham). Reared: Thistle [*Cirsium* sp.]; issued July 10.

## 31. SESIIDAE

### **ALBUNA** Hy. Edwards

*A. fraxini* (Hy. Edwards): June 21; July 16, 30; August 15.

### **CARMENTA** Hy. Edwards

*C. bassiformis* (Walker): July 26; August 6, 11, 12, 20; September 2.

*C. ithacae* (Beutenmüller): June 11; July 12, 17(1955, 1970), 28–30; August 8, 9, 11, 12(1947, 1961).

*C. pyralidiformis* (Walker): August 17; September 2.

### **PENNISETIA** Dehne

*P. marginata* (Harris): September 10.

### **SYNANTHEDON** Hübner

*S. acerni* (Clemens): May 20; June 5, 16(1951, 1952); July 17; August 24, 31; September 3.

- S. exitiosa* (Say): June 20; July 9; August 8.  
*S. pyri* (Harris): August 31.  
*S. tipuliformis* (Clemens): May 26; June 3.

## 32. THYRIDIDAE

### *DYSODIA* Clemens

- D. oculatana* Clemens: July 2. Reared: *Lycopus americanus* Muhl.; issued June 16. *Verbesina alternifolia* (L.) Britt. [labeled "*Actinomeris alternifolia*"]; issued August 15.

### *THYRIS* Laspeyres

- T. maculata* Harris: May 16, 17, 21, 22, 30.  
*T. sepulchralis* Guérin: June 2, 7, 8, 11, 13, 15, 16(1939, 1940), 19, 20. Reared: *Smilax rotundifolia* L.; issued June 11, 13 (overwintered as pupae).

## 33. TINEIDAE

### *ACROLOPHUS* Poey

- A. arcanelle* (Clemens): June 12, 16, 25, 26, 28.  
*A. bicornutus* Hasbrouck: June 22, 27(1964, 1970), 28; July 3(1960, 1964, 1965), 7, 11, 15, 17, 18, 21; September 14.  
*A. mortipennella* (Grote): June 3, 11, 12, 18, 20(1945, 1976), 21, 22; July 1, 2, 10.  
*A. morus* (Grote): September 18; October 2, 3(1967, 1969), 5, 12, 17, 20.  
*A. plumifrontella* (Clemens): June 5, 17, 18, 22, 25, 28, 29, 30(1969, 1973).  
*A. popeanella* (Clemens): July 1-3, 5, 11, 20.  
*A. propinquus* (Walsingham): June 14, 17, 21, 23; July 2, 14; August 11; September 10.  
*A. texanella* (Chambers): July 4, 8, 10, 17, 20, 21, 24-26, 27(1959, 1961), 28, 30.

### *AMYDRIA* Clemens

- A. confusella* (Dietz): June 8, 18, 27, 28; July 6, 9(1941, 1943), 20(1945, 1965), 28, 31; August 3, 10, 14; September 5, 6, 22.  
*A. effrentella* Clemens: June 2, 3, 5, 9, 11-13, 22(1948, 1974), 28, 30(1944, 1947); July 1, 14.

### *CHOROPLECA* Durrant

- C. vesaliella* (Chambers): June 3, 8-12, 13(1942, 1948), 14, 16, 20, 22, 23, 28; July 4, 9, 10; August 18.

### *DIACHORISIA* Clemens

- D. velatella* Clemens: June 7, 12, 13, 20, 23-26, 29(1964, 1967); July 2, 6, 10(1963, 1968), 12(1965, 1966), 15, 16(1966, 1967), 22(1965, 1967), 26(1957, 1965, 1967, 1968); August 24; September 2.

### *ECCRITOTHRIX* Bradley & Hinton

- E. trimaculella* (Chambers): July 2, 10, 15, 23, 25, 27, 30, 31; August 6.

### *EUDARCIA* Clemens

- E. eunitariaeella* Chambers: June 20, 24, 26, 30(1963, 1967, 1974); July 6, 8, 14-17, 20, 22(1965, 1966), 25.

### *FERNALDIA* Grote

- F. anatomella* Grote: May 14.

### *HOMOSETIA* Clemens

- H. costisignella* (Clemens): June 5, 7, 9, 10, 15(1942, 1964), 30; July 10; August 9, 14, 17.  
*H. fasciella* (Chambers): May 27, 31; June 1, 8, 9, 14, 21; July 23; August 6, 8, 13, 23, 27.  
*H. tricingulatella* (Clemens): June 5, 15, 17, 18, 22; July 7(1962, 1967), 8, 10(1963, 1965, 1966, 1973), 11-13, 15-17, 22, 25, 26, 29(1965, 1970); August 18, 21, 29.

### *HOMOSTINEA* Dietz

- H. curviliniella* Dietz: June 10, 11, 16, 20; July 27, 30; August 4, 7, 17, 28; September 10, 20.

### *HYBROMA* Clemens

- H. servulella* Clemens: June 28(1944, 1962, 1965); July 3(1954, 1964), 4(1942, 1948), 7, 9(1961, 1963), 10, 14, 17; August 6.

### *ISOCORYPHA* Dietz

- I. mediotriatella* (Clemens): July 16, 18, 19, 23, 25, 28, 29; August 13, 19.

### *KEARFOTTIA* Fernald

- K. albifasciella* Fernald: June 25(1939, 1973), 28; July 4(1943, 1952), 10, 14, 29, 31.

### *LEUCOMELE* Dietz

- L. miriamella* Dietz: June 5, 9, 13, 18(1948, 1954), 19-21, 22(1960, 1966), 30; July 4, 6, 15(1963-1965, 1968), 16-18, 22, 28; August 20.

### *MONOPIS* Hübner

- M. crocicapitella* (Clemens): August 18.  
*M. dorsistrigella* (Clemens): May 23; June 4, 6, 9(1962, 1965), 10, 12(1948, 1954), 13, 17(1956, 1971), 18(1934, 1948), 22(1941, 1960), 23(1963, 1967), 25, 28, 29; July 6, 8, 10, 16, 19, 26.  
*M. marginistrigella* (Chambers): May 25, 27, 28, 30; June 2, 4(1959, 1974), 5, 6, 7(1942, 1960), 10, 12, 15(1952, 1956, 1963, 1973), 19, 20, 29; August 6, 12, 15, 18, 22, 23, 30, 31; September 4, 7.  
*M. spilotella* Tengström: August 24.



**NEMAPOGON** Schranck

*N. acapnopennella* (Clemens): May 20; June 4, 6, 11, 18, 19, 26; July 10; August 5, 9, 13, 18, 26, 31.

*N. auropulvella* (Chambers): June 2, 10, 16, 22, 24; August 13–15; September 2, 12.

*N. granella* (Linnaeus): May 19; June 4, 9, 18; July 8, 18; August 17, 28; September 18.

*N. multistriatella* (Dietz): May 14, 16, 23(1950, 1956), 29; June 6, 7(1942, 1964), 11, 22(1966, 1958), 24; August 6, 28; September 1.

*N. variatella* (Clemens): May 29; June 1; July 14; August 12–15, 26, 29; September 4, 17, 20.

*N. sp.*: June 18, 25, 30; July 4, 7, 13(1953, 1968), 17, 25; August 11. Notes. Davis (pers. comm.) stated that the moths associated with these data represent a species that he will name and describe in the near future.

**NIDITINEA** Petersen

*N. spretella* (Denis & Schifferrmüller): June 1, 13; July 10, 20; August 5, 6, 12, 22, 27; September 5.

**OENOE** Chambers

*O. hybromella* Chambers: June 19, 23(1964, 1967), 26, 27; July 6, 7, 8(1944, 1964), 11, 15(1966, 1967), 17, 18, 20, 21, 22(1951, 1959, 1966), 24, 25, 28; August 4, 6, 10, 18.

**SCARDIA** Treitschke

*S. approximata* Dietz: June 10, 16, 23(1950, 1951); July 4, 7, 8(1938, 1941, 1959), 12(1944, 1947), 22, 25, 27; August 1, 11.

*S. fuscofasciella* (Chambers): June 8, 16–18; July 8, 12, 28; August 2, 4.

**SETOMORPHA** Zeller

*S. rutella* Zeller: July 9, 28, 30; August 12, 24; September 15, 17, 18, 20.

**TINEA** Linnaeus

*T. apicimaculella* Chambers: May 16, 24, 27, 29; June 5, 6, 9, 16, 19; July 2(1960, 1964, 1975), 3, 7, 13–15, 18, 20, 23, 25(1967, 1973), 31; August 4, 8, 10(1973, 1974, 1976), 12(1963, 1969), 13, 14, 16, 20, 24, 25, 28, 29; September 1, 5, 18(1963, 1972).

*T. carnariella* Clemens: May 19, 25, 29; June 6, 13(1968, 1976); August 2, 7, 10, 12, 21; September 2, 30.

*T. mandarinella* Dietz: June 26(1962, 1965); July 8, 11, 12(1963, 1964), 16; September 4.

*T. pellionella* Linnaeus: April 4; June 6, 7, 10–12, 18; July 17.

*T. thoracestrigella* Chambers: May 28; June 12, 15, 16, 18, 20, 22, 28(1957, 1965), 29, 30(1957, 1960); July 1, 8, 9, 14.

**TINEOLA** Herrich-Schäffer

*T. bisselliella* (Hummel): March 29 (indoors); April 15, 22(1961, 1962), 28; May 18, 19; June 21.

**XYLESTHIA** Clemens

*X. pruniramiella* Clemens: June 3, 18; July 5, 9, 10(1969, 1972), 19, 20, 22; August 29; September 8.

**34. TISCHERIIDAE****TISCHERIA** Zeller

*T. aenea* Frey & Boll: May 6; June 4; July 24; August 7, 16. Reared: *Rubus occidentalis* L.; issued August 24, 29.

*T. badiiella* Chambers: April 12; June 6. Reared: *Quercus alba* L. (mine on upperside of leaf); issued February 10; March 4, 21, 30; April 4 [apparently all indoors].

*T. citrinipennella* Clemens: May 3, 9, 22, 26(1966, 1967); June 2(1966, 1967), 4; August 9, 29. Reared: *Quercus alba* L. (blotch leaf mine on upperside of leaf); issued February 16, 22, 23 (all indoors). *Quercus imbricaria* Michx. (leaf mine on upperside of leaf or under rolled edge of leaf); issued January 26; February 16 (from pupa in mine under rolled edge of leaf); March 25 (all indoors). *Quercus sp.*; issued February 26; March 1, 4, 9 [apparently all indoors].

*T. heliopsisella* Chambers: June 1, 4(1964, 1966), 26; July 10, 22; August 11–13, 23, 31. Reared: *Ambrosia trifida* L. (blotch mine); issued July 28, 30; August 12 (pupa in nidus). *Aster sp.* (blotch mine); issued January 20 (indoors); July 2. *Helianthus grosseserratus* Martens(?) (leaf miner); issued March 28 (indoors). *Helianthus sp.* (blotch leaf miner); issued January 20 (indoors); April 23 (indoors); June 17; July 29; August 16. *Heliopsis sp.* (blotch leaf miner); issued July 24.

*T. malifoliella* Clemens: May 1, 17, 19, 26; June 1, 3, 7, 20, 24, 26; July 7, 22(1959, 1964), 27; August 2, 9, 15, 19, 29; September 9. Reared: *Crataegus sp.* (miner); issued June 2 (overwintered as pupa).

*T. purinosella* Chambers: May 22, 26, 30; June 3, 8, 28. Reared: *Quercus alba* L. (blotch mine on upperside of leaf); issued March 2, 26 (all indoors); May 7 (indoors); June 7 (overwintered as a pupa); August 12.

*T. quercitella* Clemens: May 18; June 4, 6, 10; July 14, 26; August 26. Reared: *Quercus alba* L. (blotch mine on upperside of leaf); issued February 3, 20 (all indoors); March 6, 12, 13, 18, 20, 24, 27 (all indoors); April 4 (indoors). *Quercus imbricaria* Michx.; issued February [no date given] (indoors). *Quercus velutina* Lam. (leaf miner); issued May 8. *Quercus sp.*; issued February 27 (indoors); April 3, 10 (all indoors).

*T. solidagonifoliella* Clemens: April 26; May 18; June 7; July 25; August 4(1942, 1968), 8, 15. Reared: *Aster sp.* (miner); issued July 3, 9. *Solidago latifolia* L.; issued August 4.

*T. zelleriella* Clemens: March 8; June 24; August 16, 20. Reared: *Quercus alba* L. (blotch leaf miner on upperside of leaf); issued February 23, 24 (all indoors); March 1 (indoors). *Quercus macrocarpa* Michx.; issued August 15. *Quercus* sp.; issued March 1, 9, 11, 13 [indoors (?)].

### 35. TORTRICIDAE

#### ACLERIS Hübner

- A. cervinana* (Fernald): May 1; June 28–30; July 1, 18, 22, 31; August 11.
- A. chalybeana* (Fernald): March 31; June 26; July 5, 7, 15(1963, 1964), 18, 20, 21; August 18, 20. Reared: *Acer saccharum* Marsh.; issued July 8; August 31; September 14.
- A. cornana* (McDunnough): March 28; April 21; May 26; June 4, 6, 10, 22, 30; July 20, 28, 29; August 5, 14, 20, 21, 27. Reared: *Cornus stolonifera* Michx.; issued June 6. *Cornus* sp. (leaf roller); issued June 15; October 16.
- A. flavivittana* (Clemens) (?): April 20; July 14.
- A. forbesana* (McDunnough) (?): June 23. Reared: *Cornus* sp. (leaf roller); issued October 8, 12, 13.
- A. hastiana* (Linnaeus): June 10, 26; July 1, 9, 17.
- A. negundana* (Busck): June 3, 4, 6, 7, 16, 21, 22, 27. Reared: Box elder [*Acer negundo* L.]; issued June 2.
- A. nivisellana* (Walsingham): April 7, 9, 10; May 4, 16; June 4, 24, 27(1962, 1970); July 7, 10(1946, 1967), 11, 16, 31; August 12(1974, 1975); October 25, 31.
- A. ptychogrammos* (Zeller): April 14, 20; June 3; August 6. Reared: *Cornus stolonifera* Michx.; issued July 10.
- A. schalleriana* (Linnaeus): March 5, 24; June 2, 9, 12; June 15; November 2. Reared: *Prunus virginiana* L.; issued July 1. *Viburnum prunifolium* L.; issued June 14.
- A. semiannula* (Robinson): March 19; July 28; October 3, 14, 25; November 1. Reared: Soft maple [*Acer saccharinum* L.] (in conspicuous fold along midrib of leaf); issued October 4, 14.
- A. tripunctata* (Hübner): October 18. Reared: White oak [*Quercus alba* L.]; issued September 29.
- A. walkerana* (McDunnough): June 8–11, 29; August 2, 8, 9, 15; November 2.

#### ADOXOPHYES Meyrick

- A. furcatana* (Walker): June 12; July 16.
- A. negundana* (McDunnough): May 25, 27; June 8, 9, 12, 16, 25; July 24; August 7, 12, 13, 21. Reared: *Acer negundo* L.; issued May 24, 28; June 14, 15, 19.

#### ANCYLIS Hübner

- A. brauni* (Heinrich): May 2(1968, 1969), 4, 6–8, 13, 14(1963, 1968), 18, 20, 26, 31; June 2, 4, 9, 10, 27; July 6(1962, 1974), 12, 25; August 2; September 8.
- A. burgessiana* (Zeller): May 9, 13, 15, 23, 25(1938, 1966), 27, 29, 30(1937, 1938); June 2. Reared: *Corylus americana* Walt.; issued May 31 (larva in fall). *Prunus serotina* Ehrh.; issued May 23.

*A. comptana* (Fröhlich): April 17, 28(1936, 1960); May 1, 4–6, 20, 24, 27; June 8, 13, 15, 24; July 28; August 2, 4, 5, 10(1955, 1968), 14, 16, 25.

*A. diminutana* (Haworth): April 30; June 23, 27, 29; July 27; August 30; September 7.

*A. divisana* (Walker): May 7, 15, 16, 18, 23, 26, 29(1944, 1974), 30; June 8, 10(1944, 1966), 14; July 15, 25, 29; August 2, 5, 9, 25(1973, 1975); September 6.

*A. laciniana* (Zeller): May 6, 13(1945, 1962), 14, 17(1949, 1967), 18, 21, 22(1953, 1964), 23(1943, 1948), 25, 30(1951, 1963), 31; June 2(1940, 1944, 1966), 3, 7. Reared: *Ostrya virginiana* (Mill.) K. Koch; issued May 23. *Quercus alba* L.; issued June 10.

*A. metamelana* (Walker): April 20, 25(1957, 1959, 1960), 27, 28; May 1, 3, 6, 10, 13, 16, 20, 27, 30; June 8, 13, 16, 19, 21, 28; July 8, 16, 23, 26, 30; August 10; September 2.

*A. muricana* (Walsingham): May 2, 3, 9, 14, 16, 18, 19, 20(1941, 1944), 21, 23–26, 29, 31; June 1(1948, 1974); July 19, 23, 31; August 1, 3, 5, 13, 15, 17, 20, 26.

*A. nubeculana* (Clemens): May 9, 15, 24(1946, 1962), 25; June 3, 4, 8, 9(1945, 1961), 11, 13. Reared: *Crataegus* sp.; issued May 23; June 13 (overwintered as a pupa).

*A. plantanana* (Clemens): May 9, 21, 22, 28–30(1939, 1948), 31(1944, 1949); June 3, 4, 6, 9, 10; July 17, 19; August 2, 4.

*A. semiovana* (Zeller): May 3, 9, 16; June 2, 4(1944, 1956), 6, 7, 14, 23, 27.

*A. spiraeifolia* (Clemens): May 20, 21, 30(1945, 1949, 1953), 31; June 1(1946, 1948), 3, 5, 8, 12(1938, 1940), 15; July 12. Reared: *Physocarpus opulifolius* (L.) Maxim.; issued March 23, 29, 31 (forced indoors); April 2, 6, 7 (all forced indoors); June 24; July 2.

#### ARCHIPS Hübner

*A. argyrospila* (Walker): June 3, 6(1936, 1937), 9, 10(1963, 1975), 11, 13, 16, 20, 21, 23, 24. Reared: *Amorpha fruticosa* L.; issued June 5.

*A. cerasivorana* (Fitch): June 18, 22, 23, 25(1939, 1963), 26–28, 29(1959, 1970); July 2(1965, 1975), 7, 11.

*A. fervidana* (Clemens): May 22; June 28(1970, 1973).

*A. grisea* (Robinson) (?): June 4, 7, 9(1956, 1964), 10(1962, 1963), 11, 13(1968, 1974), 14(1964, 1976), 16, 17, 18(1963, 1975), 19–21, 23, 24(1963, 1966), 26, 27.

*A. infumatana* (Zeller): June 23, 24, 26, 27, 28(1962, 1971), 29, 30; July 1(1969, 1973), 2, 3, 5, 10.

*A. purpurana* (Clemens): June 15, 18, 24, 26, 28; July 1, 12.

*A. semiferana* (Walker): June 4, 7–9, 13(1963, 1974), 16(1939, 1940, 1969), 17(1972, 1973), 18(1965, 1975), 22, 24, 27–29; July 4. Reared: *Quercus alba* L.; issued June 9, 11.

#### ARGYROTAENIA Stephens

*A. alisellana* (Robinson): June 3, 4, 9, 12, 13, 20. Reared: Burr oak [*Quercus macrocarpa* Michx.]; issued June 14. Black oak [*Q. velutina* Lam.]; issued June 10.



**"A." cockerellana** (Kearfott): September 14, 18, 20, 22, 23, 26; October 3, 12.

**A. juglandana** (Fernald): May 30; June 8, 13, 16, 18–20, 24, 28; July 4, 10, 11(1953, 1963). Reared: Hickory [*Carya* sp.]; issued June 8, 11, 16. Black walnut [*Juglans nigra* L.]; issued June 21. Walnut [*Juglans* sp.]; issued June 25.

**A. quadrifasciana** (Fernald): June 6, 8, 14, 16(1939, 1940), 17, 21, 23, 25, 30. Reared: *Crataegus* sp.; issued June 2, 4.

**A. quercifoliana** (Fitch): June 6, 9, 13, 15, 30(1940, 1973); July 1, 6, 8, 10, 12. Reared: Black oak [*Quercus velutina* Lam.]; issued June 12. Oak [*Quercus* sp.]; issued June 12, 20.

**A. velutinana** (Walker): April 2, 20, 21, 25(1959, 1966), 27, 28(1936, 1970); June 18, 22; July 9, 15; August 5, 10, 13, 18. Reared: *Prunus serotina* Ehrh.; issued May 18 (wintered as a pupa).

### **ATERPIA** Guenée

**A. approximana** Heinrich: May 19, 22, 23, 25, 26; June 29; August 2, 6, 9, 10. Reared: Loosestrife [*Lysimachia* sp.]; issued June 6, 9. Notes. The name "loosestrife" applies to *Lysimachia* (Primulaceae) as well as *Lythrum* (Lythraceae). The former is assumed to be the correct generic association on the basis that MacKay (1959) recorded the same caterpillar species from *Lysimachia ciliata* L.

### **BACTRA** Stephens

**B. furfurana** (Haworth): May 24, 25; June 15, 25, 28, 30; July 1, 6, 9, 19, 26, 27; August 5, 7, 15, 24, 26, 28; September 1, 2, 5, 9, 12.

**B. maiorina** Heinrich: June 6, 7, 9, 11(1934, 1944), 12, 18, 21, 25, 28; July 22, 23, 29(1961, 1967); August 2, 4, 9, 23, 24; September 9.

**B. verutana** (Zeller): May 6–8; June 30; July 16, 18, 27, 28; August 7, 13(1971, 1972), 23, 30; September 2, 5, 6(1943, 1945), 11, 18, 28.

### **CHIMOPTESIS** Powell

**C. pennsylvaniana** (Kearfott): April 12, 18, 25, 28.

### **CHORISTONEURA** Lederer

**C. conflictana** (Walker): June 4, 9, 16, 20, 24, 26, 28(1937, 1957), 30(1969, 1972).

**C. fractivittana** (Clemens): May 16, 19(1951, 1955, 1970), 20, 26; June 2; July 7.

**C. fumiferana** (Clemens): June 13; July 15, 29.

**C. obsoletana** (Walker): June 6; July 21, 25; August 1, 2, 8, 13, 15, 24; September 9, 12, 30; October 6.

**C. rosaceana** (Harris): June 2(1934, 1972), 15, 24, 27, 30; July 19, 28; August 2, 5, 6, 9, 10, 12, 14, 16, 18, 21, 29; September 1, 19(1964, 1970), 20, 23, 25. Reared: *Amorpha fruticosa* L.; issued July 16. *Comandra umbellata* (L.) Nutt.; issued June 21(1955). *Crataegus* sp.; issued June 14. Golden rod [*Solidago* sp.]; issued June 21(1960).

### **CLEPSIS** Guenée

**C. clemensiana** (Fernald): June 2, 4, 8, 27; July 19, 21, 24, 28; August 2, 19.

**C. melaleucana** (Walker): May 20, 24, 29; June 3, 6, 7.

### **COELOSTATHMA** Clemens

**C. discopunctana** Clemens: June 3–5, 14, 18, 22, 23; July 7, 31; August 13, 16(1942, 1948), 30.

### **CROESIA** Hübner

**C. albicomana** (Clemens): May 31; June 3, 6, 7, 8(1939, 1949), 11, 12–15, 19, 24(1960, 1966). Reared: *Rosa* spp., roses, wild rose (leaf roller); issued May 31; June 3, 5–7, 15. *Quercus* sp., oak; issued May 27; June 10.

**C. semipurpurana** (Kearfott): May 19, 27, 31; June 2, 3(1949, 1972), 4, 5(1960, 1963), 6, 8(1960, 1963), 9–11, 12(1940, 1953), 13, 17, 26, 30. Reared: *Quercus velutina* Lam., black oak; issued June 11; *Quercus* sp., oak; issued May 27.

### **CYDIA** Hübner

**C. albimaculana** (Fernald): April 20; May 2, 4, 8, 13(1962, 1967), 14(1962, 1963, 1968), 16, 19, 20, 23, 27, 28; June 2(1951, 1972), 4(1966, 1967), 7, 15; July 5, 29; August 18.

**C. candana** (Forbes): April 25, 27; May 4, 6, 12, 15, 30.

**C. caryana** (Fitch): May 9, 15, 16, 21, 28, 29; June 1(1961, 1973), 12, 28, 29; July 8(1959, 1967), 12(1944, 1965), 17, 18(1963, 1975), 21, 26, 30, 31; August 11, 17, 20, 24, 29, 30; September 2, 3, 6, 9, 30; October 19.

**C. gallaesaliciana** (Riley): May 20; June 9, 15, 20; July 14.

**C. grandicula** (Heinrich): May 18; June 16; September 3.

**C. pomonella** (Linnaeus): May 19, 31; June 2, 3, 6, 15, 19, 29; July 6, 13, 21; August 10, 26; September 22.

**C. strobilella** (Linnaeus): April 24.

### **DECODES** Obratzsov

**D. basiplaganus** (Walsingham): August 28, 31; September 1(1973, 1976), 4, 6, 8(1960, 1967, 1968), 9, 12(1941, 1962, 1967), 13(1968, 1969), 14, 17(1967, 1968), 18(1963, 1972), 19, 20, 23(1968, 1969).

### **DICHRORAMPHA** Guenée

**D. bittana** (Busck): May 26, 30, 31(1933, 1963); June 2, 3, 6, 8, 13, 18, 19.

**D. incanana** (Clemens): May 25, 30; June 4, 5, 7, 18, 23; July 4, 12, 21, 23; August 4, 8, 12, 16, 26, 29.

**D. leopardana** (Busck): May 20, 30; June 2, 4, 9; July 31; August 3, 6, 7(1942, 1964), 10, 11, 12(1946, 1957), 14, 15(1968, 1974), 17(1968, 1969), 18, 20, 27(1962, 1969); September 4. Reared: *Eupatorium rugosum* Houtt. [labeled "*Eupatorium urticaefolium*"]; issued August 9, 10, 17, 25.

**D. simulana** (Clemens): June 1(1962, 1963), 2, 3(1955, 1972), 6(1956, 1959), 11(1966, 1969), 12, 16, 18.

**ECDYTOLOPHA** Zeller

*E. insiticihana* Zeller: May 11, 15; June 5, 8; July 20; August 20, 23, 26; September 14. Reared: *Robinia* sp. (twig gall); issued August 5, 10.

*E. punctidiscana* (Dyar): May 24, 25; June 3, 6, 7, 22, 23, 25, 26; July 6, 13, 24, 30; August 16, 20, 24.

**ENDOPIZA** Clemens

*E. monotropa* (Heinrich): August 29. Reared: *Monotropa uniflora* L. (flowers); issued May 6, 7, 12.

*E. rhoifructana* (Kearfott): July 29, 31; August 8, 11, 18. Reared: *Prenanthes* sp. (in flowers); issued May 28. Sumac [*Rhus* sp.] (seed heads); issued July 27. *Rudbeckia* sp. (seed heads); issued May 29.

*E. sambuci* (Clarke) (Figure 6.l): June 4(1963, 1974), 6, 14, 19; July 2, 24(1960, 1966), 29; August 12, 30, 31. Reared: *Sambucus canadensis* L.; issued July 3 (holotype, USNM; Clarke 1953), 21, 24, 26; August 1. Elderberry [*Sambucus* sp.]; issued July 4, 15, 26, 27.

*E. slingerlandana* (Kearfott): May 30; August 10. Reared: *Eupatorium perfoliatum* L. (boneset); issued April 22, 24, 25, 28 (larvae collected previous fall, forced indoors); June 29; July 1.

*E. spiraeifolia* (Heinrich): June 12.

*E. vernoniana* (Kearfott): May 31; June 2, 30; July 7; August 2, 6, 9, 15, 17, 18, 20, 29; September 3. Reared: *Aster* sp.; issued July 28.

*E. viteana* Clemens: May 9; June 2, 6, 12; August 2, 10(1964, 1975), 27(1970, 1975), 28.

*E. yaracana* (Kearfott): May 3, 19, 25, 26; June 1, 4.

**ENDOTHENIA** Stephens

*E. albolineana* (Kearfott): May 22; June 6, 7, 10, 11(1966, 1970), 15, 20, 23, 24. Reared: Spruce [*Picea* sp.]; issued June 4–6, 10, 12, 13, 19.

*E. conditana* (Walsingham): June 7, 19, 24, 27, 30(1964, 1969); July 1, 2, 7, 9, 15, 20, 27, 28, 31; August 1, 3(1963, 1969), 7, 14, 15, 17, 21, 30.

*E. hebesana* (Walker): April 29; May 26; June 3, 6, 10, 22; July 17, 30; August 1, 18; September 5, 10; October 12. Reared: *Gerardia flava* L. (in seed pods); issued May 31; June 4. *Penstemon* sp. (in seed pod); issued July 16. *Scutellaria lateriflora* L. (stem borer); issued June 15. *Scutellaria* sp. (skullcap) (stem borer); issued July 31. *Teucrium canadense* L. (stem borer); issued June 21; July 17, 22.

*E. heinrichi* McDunnough: May 27–30; June 30; August 4, 14, 15(1965, 1968), 17, 18; September 13.

*E. infuscata* Heinrich: June 16, 29; July 1, 10, 11, 14, 15, 20–22, 24, 25(1966, 1967), 27, 28, 30, 31; August 1, 2, 5, 6(1960, 1969, 1971), 7, 10, 14; September 4, 7, 9.

*E. microptera* Clarke (Figure 6.m): May 19, 20, 28, 29, 31; June 5, 8(1950, 1968), 10, 12, 14, 17, 20(1956, 1967), 23, 26; July 17; August 14 (holotype, USNM; Clarke 1953), 24, 30; September 2, 5.

*E. montanana* (Kearfott): May 16, 30, 31; June 4, 6, 9(1965, 1973), 10, 12, 25, 29; July 8, 27; August 1.

*E. nubilana* (Clemens): May 29; June 6(1959, 1966), 14, 18, 22, 23(1962, 1963); July 6, 9, 19, 24; August 5, 7, 15, 17; September 2, 4, 11. Reared: *Teucrium canadense* L. (root borer); issued June 23, 26, 27; August 7, 9, 23, 24.

**EPIBLEMA** Hübner

*E. abruptana* (Walsingham): June 29; July 2, 12, 14, 15(1964, 1974), 16–18, 23, 24(1959, 1968), 27(1949, 1961), 30; August 1, 5, 13.

*E. boxcana* (Kearfott): May 8, 14, 19, 23, 24, 26, 27, 31; June 1(1942, 1963), 4, 6, 7, 9, 11(1944, 1969), 12, 14, 15, 20, 24; August 21.

*E. brightonana* (Kearfott): June 29, 30; July 2, 3, 7, 18, 21, 23, 26(1950, 1965); August 2, 3, 5, 7, 8, 11, 12(1963, 1965), 14(1964, 1969), 17, 18(1969, 1971).

*E. carolinana* (Walsingham): June 1, 16, 19, 30; July 3, 7(1970, 1972), 9, 12, 17, 23, 26(1963, 1968); August 3–5; September 1. Reared: *Rudbeckia laciniata* L. (in roots); issued July 8; August 10.

*E. deflexana* Heinrich: June 13; July 3, 17(1969, 1970), 20, 21, 23, 24, 26; August 2, 6(1954, 1959), 7.

*E. desertana* (Zeller): May 27.

*E. dorsisuffusana* (Kearfott): June 3, 6, 11, 13, 14, 19, 20(1967, 1975); July 2, 3, 7, 8(1964, 1974), 9, 12, 14, 20, 24, 28.

*E. infelix* Heinrich: June 3, 7, 16, 20–23, 25, 27, 28, 30; July 7(1967, 1973), 12–15, 29.

*E. iowana* McDunnough: April 26, 28; May 10, 11, 13(1945, 1975), 14, 18(1948, 1955), 20, 22(1939, 1960, 1967), 25, 28, 29, 30(1943, 1950), 31. Reared: *Ratibida pinnata* (Vent.) Barnh. (in roots); issued June 3, 10, 25 (Clarke 1953), 28. Notes. *Epiblema naoma*, which Clarke (1953) described from "Putnam Co.," recently was synonymized with *E. iowana* McDunnough by Miller (1985b).

*E. numerosana* (Zeller): July 27, 31.

*E. obfuscana* (Dyar): May 4, 11–14, 18(1938, 1972), 19, 24, 25, 27, 28; June 1, 2(1934, 1966), 3, 9(1961, 1973), 12, 14, 15, 17, 20; July 2, 17, 31.

*E. otiosana* (Clemens): May 26; June 13, 18, 20–22, 24, 30(1947, 1950, 1966); July 6, 29, 31; August 5, 12, 13, 15, 18(1947, 1961), 23, 25, 31; September 11. Reared: *Bidens* sp. (stem borer); issued August 5.

*E. resumptana* (Walker): May 3, 5, 9–11, 13(1945, 1946), 18, 23, 25, 27, 29, 31; June 4, 7, 12(1937, 1946), 16, 27.

*E. scudderiana* (Clemens): May 8, 27; June 13, 14, 16, 17, 18(1951, 1968), 19, 21(1937, 1941), 22, 23(1946, 1968), 27, 28(1937, 1941), 29. Reared: *Solidago canadensis* L. (stem galls); issued May 21, 25, 28.

*E. strenuana* (Walker): May 1, 7, 10, 13, 20, 27; June 1; July 10, 15, 18, 25(1966, 1970), 30(1950, 1962); August 24, 29.

*E. tandana* (Kearfott): June 9, 10, 16, 17, 18(1967, 1968), 28(1965, 1966, 1975); July 2, 10(1967, 1969, 1973), 17. Reared: *Rudbeckia laciniata* L. (in roots); issued June 24.

*E. tripartitana* (Zeller): June 22.



**EPINOTIA** Hübner

*E. aceriella* (Clemens): May 15, 27, 28, 30(1948, 1955); June 4.

*E. bicordana* Heinrich: April 16; June 9(1970, 1973), 10, 11, 13, 15, 25, 30; July 3, 7, 11(1968, 1970), 13, 18, 22, 24–26, 28(1962, 1963), 30, 31; August 6, 12, 13, 21.

*E. bicordana* Heinrich (?): June 4, 8, 21; July 8–10, 12, 18(1974, 1975), 20; August 13.

*E. criddleana* (Kearfott): August 26.

*E. laracana* (Kearfott): March 20, 28(1963, 1968), 29, 30; April 2, 6, 10–12, 14, 16(1963, 1964), 21, 23, 29; May 11, 16(1967, 1964); June 4, 6.

*E. lindana* (Fernald): September 6, 9, 15, 18(1963, 1972, 1976), 19, 22.

*E. madderana* (Kearfott): June 20. Notes. This entry, courtesy of R.L. Brown, is based on a "Putnam Co." specimen in the USNM. Data for *Epinotia nonana* (Kearfott), *E. xanada* (Kearfott), and *E. zandana* (Kearfott) (see below) are composites of Brown's USNM tabulations and INHS records.

*E. nonana* (Kearfott): July 23 (1962, 1965), 27, 30; August 1, 10(1971, 1976), 13, 15, 18(1944, 1973), 19–21, 22 [cottonwood trunk (*Populus* sp.)], 24(1962, 1964), 25, 28, 29(1932, 1942, 1972); September 3, 6(1942, 1945), 10.

*E. timidella* (Clemens): May 9, 13, 15; June 5.

*E. vertumnana* (Zeller): March 28(1963, 1968), 30; April 2, 9, 11, 13, 16, 25(1962, 1966), 30.

*E. walkerana* (Kearfott): July 15, 26(1963, 1965), 27, 31; August 1, 2, 5, 7, 11, 12(1948, 1969), 13(1942, 1964), 21, 23. Reared: In catkins of *Corylus* sp. (overwintered as pupae); issued July 27; August 3, 4, 8.

*E. xandana* (Kearfott): March 15, 20, 24, 29; April 2(1956, 1963), 4, 5, 6, 10.

*E. zandana* (Kearfott): March 17(1945, 1966), 18(1940, 1966), 19–23, 24(1939, 1949, 1963), 26–31; April 1, 2(1961, 1963), 3, 4, 5(1945, 1967), 6, 7, 9, 30.

**EPISIMUS** Walsingham

*E. argutanus* (Clemens): May 21, 30(1936, 1953); June 2(1940, 1943), 8(1939, 1960), 9(1945, 1973), 12; July 17, 19, 30; August 28. Reared: *Ambrosia trifida* L.; issued June 2, 13 (wintered as pupae). *Hamamelis virginiana* L. (larvae in folded leaf); issued July 26, 29. Sumac [*Rhus*]; issued August 28.

**EUCOSMA** Hübner

*E. albiguttana* (Zeller): July 9, 12, 15, 24, 30(1973, 1975); August 1, 3, 17, 25; September 3.

*E. agricolana* (Walsingham): May 22, 23; June 5, 6, 8, 12, 14(1949–1951), 15–17, 19, 23(1946, 1968), 30; July 2, 6(1952, 1967), 11, 12(1967, 1968), 15, 18, 30; August 5, 12.

*E. bilineana* Kearfott: June 1, 9, 12, 14.

*E. cataclystiana* (Walker): June 22, 27–30; July 3, 7, 10, 17, 21, 24, 26, 28; August 2, 16, 20, 25; September 3.

*E. circulana* Hübner: June 24; July 14; August 5, 16.

*E. comatulana* (Zeller): September 6.

*E. derelecta* Heinrich: July 15, 26, 27, 29; August 7(1934, 1963), 12(1961, 1975), 13, 18, 23(1959, 1963), 24, 25.

*E. dorsisignatana* (Clemens): August 12, 15, 22, 25, 26, 28, 31(1936, 1962); September 3(1933, 1940), 5, 12(1936, 1942), 14, 15, 17(1967, 1968), 18, 20(1936, 1940, 1967), 22(1936, 1968), 23; October 3, 11.

*E. fulminana* (Walsingham): June 24; July 3, 16, 24, 29; August 7, 14, 18; September 12.

*E. giganteana* (Riley): July 12(1947, 1962), 17, 19(1968, 1976), 23, 24, 30; August 10, 12. Reared: *Silphium perfoliatum* L.; issued June 30.

*E. glomerana* (Walsingham): June 22; July 29; August 1, 6, 9, 10, 12, 14(1964, 1966), 15, 16, 17(1964, 1965), 18(1947, 1969), 20, 21, 23(1943, 1964), 24(1949, 1962), 25, 28, 29(1964, 1967), 30; September 2.

*E. graciliana* Kearfott: July 11, 22, 24; August 8, 9.

*E. heathiana* (Kearfott): July 7, 9, 10, 18, 26, 29; August 2, 10, 18.

*E. matutina* (Grote): May 28, 30, 31; July 12, 19, 25, 26, 29(1935, 1961), 30; August 6(1953, 1965), 9, 10(1949, 1964, 1976), 12, 15(1954, 1965), 17, 20(1937, 1946), 25; September 15.

*E. nandana* Kearfott: August 12, 17, 23, 25; September 12, 14, 20.

*E. pandana* Kearfott: June 17, 27, 28; July 8, 11; August 10.

*E. ridingsana* (Robinson): July 27, 30; August 1, 6, 15, 29–31; September 6.

*E. robinsonana* (Grote): March 10; May 20, 24, 25; June 3(1962, 1965), 4, 7, 10, 16, 18, 21–24, 28(1961, 1975), 29, 30.

*E. rusticana* Kearfott: May 16; June 3, 18, 27; July 1(1963, 1973), 2, 10, 16(1963, 1967), 19, 23, 27, 28, 31.

*E. sombreana* Kearfott: July 1, 10, 15, 18, 19, 30; August 5, 10(1942, 1976), 13(1945, 1968, 1974), 15, 17(1964, 1965), 18, 21, 25(1946, 1948, 1967); September 1.

*E. uta* Clarke (Figure 6.n): June 21, 23, 29; July 2, 4, 5, 10 (holotype, USNM; Clarke 1953), 17, 21, 23, 24, 28(1956, 1964); August 5, 11, 21; September 15.

*E. vagana* McDunnough: June 23–25, 29; July 2, 3, 8(1964, 1965), 10, 14, 15(1964, 1972), 19, 21, 22(1962, 1969), 28; August 1, 6, 14, 20; September 6.

*E. wandana* Kearfott: July 10.

**EUMAROZIA** Heinrich

*E. malachitana* (Zeller): May 20, 22, 31; June 10, 18, 28; July 18, 26, 27; August 20; September 6. Reared: Persimmon [*Diospyros virginiana* L.]; issued August 13, 20.

**EVORA** Heinrich

*E. hemidesma* (Zeller): May 22, 30; June 4, 14; July 16, 20, 29; August 8, 11, 17(1935, 1940), 25; September 1. Reared: *Spiraea* × *vanhouttei* (Briol) Zabel; issued July 7, 16.

**GRAPHOLITA** Treitschke

*G. angeleseana* (Kearfott): July 21.

*G. eclipsana* Zeller: April 14, 16, 19–22, 24, 25(1941, 1964), 26, 29; May 2, 4, 6(1966, 1975), 7, 16; August 16. Reared: *Amorpha canescens* Pursh; issued May 10.

*G. fana* (Kearfott): May 20, 29, 30; August 11.

*G. interstinctana* (Clemens): May 16(1936, 1969), 17, 22(1939, 1970), 28, 29; June 2, 3, 7, 9, 16; July 17, 20, 25, 27; August 1, 30; September 1, 13.

*G. packardi* (Zeller): May 13, 15(1941, 1962), 16, 22, 26, 27, 30; June 1, 2, 4, 5, 10, 11, 18, 26; July 2, 22(1965, 1969), 24; August 10, 13, 15, 17.

*G. prunivora* (Walsh): May 16, 20, 28, 29, 31; June 1, 2(1940, 1944), 4, 6(1944, 1946), 10, 11, 21, 25, 30; July 11, 18, 30; August 5, 7, 8, 11, 13, 17, 20(1944, 1973, 1974), 28, 29; September 7.

*G. tristrigana* (Clemens): May 27, 30; June 9(1970, 1973), 10, 11, 16, 17; July 19; August 7, 21; September 14.

**GRETCHENA** Heinrich

*G. amatana* Heinrich: April 12, 16, 22, 25, 28, 30; May 2(1964, 1969), 3(1939, 1949, 1965), 4, 13, 20(1945, 1965); June 1(1946, 1973), 9; July 3, 5, 7, 13.

*G. bolliana* (Slingerland): April 30; May 21, 26; June 1, 2, 16, 22, 27; July 26; August 5–7, 24, 25, 27, 29; September 6, 9, 12; October 30. Reared: Hickory [*Carya* sp.]; issued August 16. Walnut [*Juglans* sp.]; issued August 20; October 15.

*G. concitatricana* (Heinrich): April 30; July 13; August 1, 29.

*G. concubitana* Heinrich: April 4, 16, 22, 25(1960, 1962, 1966), 26; May 3(1959, 1965), 5, 6; June 10.

*G. delicatana* Heinrich: April 16, 20, 25, 26, 30; May 2, 3(1949, 1965), 6, 9, 10; July 1.

*G. deludana* (Clemens): April 25; May 2, 3, 5(1943, 1965), 6(1949, 1975), 7, 8(1949, 1963), 10, 13(1962, 1967), 16–19, 23, 24, 29, 31; June 1, 4.

**GYPSONOMA** Meyrick

*G. adjuncta* Heinrich: June 4, 13, 18, 20, 24.

*G. haimbachiana* (Kearfott): May 22, 25; June 3, 10, 14, 18, 20, 21, 28, 30(1948, 1976); July 5–7, 12; August 2, 10, 21, 22; September 1, 7. Reared: *Populus tremuloides* Michx.; issued June 7, 20, 22, 25.

*G. salicicolana* (Clemens): June 1, 4, 6, 9, 11–13, 18(1949, 1966), 20, 22, 23, 29; July 1, 7, 12, 16, 23, 26(1939, 1973), 28, 29, 30(1962, 1973), 31; August 9, 10(1939, 1970), 29.

*G. substitutionis* Heinrich: June 6, 13, 20, 30; July 28; August 6, 10, 14.

**HEDYA** Hübner

*H. chionosema* (Zeller): May 25; June 5, 6(1944, 1964), 7, 9, 12, 20, 23, 28. Reared: *Crataegus* sp.; issued May 28, 31.

*H. cyanana* (Murtfeldt): June 1; July 8, 9(1943, 1973), 13, 14(1952, 1956), 20, 23, 25; August 10(1942, 1963), 14, 25, 28.

*H. separatana* (Kearfott): May 3, 6, 21, 28, 30; June 8, 10, 17; July 1, 25; August 2, 3, 4(1943, 1963), 7, 18; September 1.

**HYSTRICHOPHORA** Walsingham

*H. taleana* (Grote): May 30; June 3(1956, 1965), 5, 8, 9, 12, 15, 16, 18, 23–25, 30; July 2, 19. Reared: *Amorpha canescens* Pursh; issued June 7, 16(1940, 1954). *A. fruticosa* L., false indigo; issued June 8, 16, 24; July 4, 14. *Petalostemum purpureum* (Vent.) Rydb., purple burr clover; issued June 9, 14, 15.

*H. vestaliana* (Zeller): May 28, 31; June 6(1963, 1964, 1975), 7, 10, 11(1935, 1969), 14, 18, 22, 23, 24(1933, 1967), 25, 27, 29(1967, 1970); July 2, 12, 18.

**LOBESIA** Guenée

*L. carduana* (Busck): April 24; May 18, 20, 26; August 3. Reared: *Cirsium vulgare* (Savi) Tenore [labeled "*Cirsium lanceolatum*"]; issued June 25; July 4, 14. Thistle [*Cirsium* sp.]; issued July 16, 18, 29; August 16.

**MELISSOPUS** Riley

*M. latiferreanus* (Walsingham): July 6, 17, 21, 25, 26; August 5, 17, 19, 24, 25, 29; September 1, 2, 14.

**NOTOCELIA** Hübner

*N. illotana* (Walsingham): May 20(1933, 1934); June 4; July 17.

**OLETHREUTES** Hübner

*O. agilana* (Clemens): May 7, 8, 13, 17, 18, 20, 24; June 5, 14, 21, 30; July 7, 16, 31; August 8, 9(1942, 1966), 12, 20.

*O. appendicea* (Zeller): May 25, 26, 28–30; June 1, 3(1956, 1975), 4, 5, 8, 12, 13(1950, 1974), 14, 15, 17, 20, 28; July 15. Reared: *Acer saccharum* Marsh. (maple); issued June 2, 4, 7. *Corylus americana* Walt.; issued May 23, 28, 30, 31; June 7, 9, 10, 12, 14. Hazel [*Corylus* sp.]; issued May 24. *Rhus glabra* L.; issued June 7. Gooseberry [*Ribes* sp.]; issued June 10.

*O. astrologana* (Zeller): May 27, 28, 29(1963, 1976), 30; June 4(1967, 1968), 6–10, 12, 13(1974, 1976), 17.

*O. auricapitana* (Walsingham): June 2, 6, 8, 14, 15, 22, 24, 30(1967, 1968).

*O. cespitana* (Hübner): May 20, 27, 29, 30, 31(1949, 1961); June 1(1936, 1963), 4, 9(1951, 1973), 17, 18, 30; July 19, 21, 23, 24, 26(1939, 1973), 28; August 6, 19, 20, 22; September 10, 13–15.

*O. comandrana* (Clarke) (Figure 6.o): May 22; June 12(1942, 1943); August 6, 8. Reared: *Comandra umbellata* (L.) Nutt.; issued May 31; June 8, 10, 11 (holotype, USNM; Clarke 1953), 12, 13, 15.

*O. concinnana* (Clemens): May 24, 27, 30(1942, 1943), 31; June 3, 5(1955, 1956), 6, 9–12, 13(1943, 1968), 14, 15, 20(1955, 1967), 22, 25(1960, 1965); July 7, 15, 25, 31; August 4, 7, 10(1934, 1939, 1975), 11, 12(1936, 1970, 1971), 13, 16; September 2.



*O. connectus* (McDunnough): May 31; June 5, 20, 22, 28; July 16; August 6, 15, 19; September 3. Reared: *Cornus foemina* Mill.; issued June 5. *C. stolonifera* Michx.; issued June 17; July 3.

*O. constellatana* (Zeller): March 22; May 25, 27, 28; June 2(1944, 1965), 4, 5, 6(1950, 1963), 7(1934, 1966, 1973), 9, 10(1967, 1969), 12, 15(1950, 1971).

*O. coruscana* (Clemens): May 28, 31; June 2, 4, 5(1939, 1956), 6, 8, 10.

*O. corylana* (Fernald): June 2, 6, 7, 10, 15. Reared: *Corylus americana* Walt.; issued May 18, 31; June 6.

*O. exaeresima* (Heinrich): June 24, 26, 28, 30; July 3, 10, 25, 29. Reared: *Cornus foemina* Mill.; issued June 29; July 14, 15. *C. racemosa* Lam. [labeled "*Cornus paniculata*"]; issued June 17. *Cornus* sp. (leaf roller); issued June 24(1942, 1943), 28, 29.

*O. exoletus* (Zeller): June 2, 5(1936, 1955), 10, 13, 14, 16, 18; July 23, 26. Reared: Blackberry [*Rubus* sp.]; issued June 14.

*O. fasciatana* (Clemens): May 29; June 2, 3, 6(1953, 1970, 1976), 7, 10(1965, 1970), 12(1935, 1937, 1973), 19, 21(1965, 1975), 22–24.

*O. furfurana* (McDunnough): May 31; June 3, 9, 10, 15, 30; July 10, 20; August 27.

*O. inornatana* (Clemens): June 6, 12, 26; July 2, 7, 16, 25, 26; August 1. Reared: *Prunus virginiana* L.; issued June 4. Wild cherry [*Prunus* sp.]; issued June 20, 23.

*O. malana* (Fernald): June 10, 17, 18, 26(1940, 1962), 27, 28, 30(1940, 1957); July 4–8, 10(1962, 1973), 12, 14, 18, 22; August 10. Reared: *Corylus americana* Walt.; issued June 9.

*O. melanomesa* (Heinrich): June 13, 15(1942, 1956), 16, 17(1956, 1968), 20, 22, 25; July 3, 4, 9. Reared: Dewberry [*Rubus* sp.]; issued June 25.

*O. merrickana* (Kearfott): June 7, 11, 12, 15–18, 24, 26, 29, 30; July 1, 7.

*O. mysteriana* Miller: June 29; July 7, 10, 11(1948, 1963, 1967), 12, 18–20, 26.

*O. nigrana* (Heinrich): June 28; July 6, 7, 9, 11, 16, 18, 19, 23, 24, 27. Reared: Maple [*Acer* sp.]; issued June 30.

*O. nitidana* (Clemens): June 28; July 2, 4, 12, 15, 20, 21, 27; August 3, 9, 10, 14, 16, 30.

*O. olivaceana* (Fernald): May 31; June 9, 10, 28; July 2, 13, 16; August 10, 13. Reared: Strawberry [*Fragaria* sp.]; issued June 10, 28.

*O. permundana* (Clemens): June 22. Reared: *Corylus americana* Walt.; issued June 6, 17, 23, 25.

*O. quadrifidus* (Zeller): June 4, 9, 11, 14, 16, 18, 25; July 1, 20, 25. Reared: *Prunus virginiana* L.; issued June 3.

*O. tiliana* (Heinrich): June 17, 23, 24, 28(1944, 1965); July 7, 10, 16, 18, 31; August 8, 9, 12, 18. Reared: *Corylus americana* Walt.; issued June 9. *Tilia americana* L.; issued June 8.

*O. troglodana* (McDunnough): June 1, 4, 6, 16, 22; July 6; August 30; September 9.

*O. valdana* (McDunnough): July 4, 29.

*O. viburnana* (McDunnough): June 22–24, 27, 29, 30; July 7, 10, 17. Reared: *Prunus virginiana* L.; issued June 20, 26, 28, 30; July 1, 3, 4, 5.

### PAMMENE Hübner

*P. felicitana* Heinrich: June 3, 5, 9, 12, 18, 23.

### PANDEMIS Hübner

*P. lamprosana* (Robinson): May 25, 31; June 2, 9, 10, 17; August 15, 17(1968, 1970), 18, 19, 21, 28, 29, 31; September 3, 13, 24. Reared: Nettle [*Boehmeria cylindrica* L. Sw. (?) or *Urtica* sp. (?)]; issued September 9.

*P. limitata* (Robinson): May 24(1949, 1962), 25–27; June 10; July 20; August 9, 14, 20, 24, 25, 28, 31; September 8, 9; October 4. Reared: *Amorpha fruticosa* L.; issued August 2; *Corylus americana* Walt.; issued June 10. *Euonymus atropurpureus* Jacq.; issued August 17. Willow [*Salix* sp.]; issued August 11.

### PELOCHRISTA Lederer

*P. corosana* (Walsingham): September 2.

*P. rorana* (Kearfott): May 29; June 9, 24; July 2, 6; August 7, 9, 10, 17.

*P. scintillana* (Clemens): May 24, 26, 28, 31; June 3, 9, 20, 21, 25, 26, 30; July 10–12, 16–20, 23(1970, 1975), 27; August 6–8, 14; September 8.

*P. womonana* "complex": June 3, 7, 13, 17, 23, 24, 29; July 1, 7, 18, 24(1961, 1965), 25, 26; August 2(1964, 1971), 3, 5, 7, 12, 17, 25.

*P. zomonana* (Kearfott): May 20, 22, 26(1939, 1956), 29; June 2(1944, 1955), 4, 6, 7, 15, 18, 22, 30(1964, 1972); July 1, 21, 24, 25, 30, 31; August 8, 10, 18, 24; September 1, 4, 5, 10, 18, 22.

### PHANETA Stephens

*P. annetteana* (Kearfott): April 21(1940, 1971), 22(1952, 1968), 25–27, 28(1949, 1970), 29(1939, 1962), 30; May 2, 3, 5, 11, 15.

*P. dorsiatomana* (Kearfott): June 19.

*P. essexana* (Kearfott): April 21, 28; May 2, 15, 23, 28; June 1(1946, 1961), 12, 18, 20, 21(1937, 1955), 30; July 14.

*P. formosana* (Clemens): June 2, 21.

*P. kiscana* (Kearfott): May 15, 22(1939, 1970), 25, 27, 28, 29(1956, 1960, 1976), 30; June 1, 4, 5, 6(1950, 1968), 9(1952, 1965, 1970), 10, 13, 14, 16(1948, 1963), 17, 18(1968, 1969), 19, 21, 23, 25; July 6; September 13.

*P. kokana* (Kearfott): October 10, 16, 18, 24, 25, 28, 29.

*P. ochrocephala* (Walsingham): July 9, 15; August 14, 15, 23, 24, 27, 28, 29(1961, 1962); September 5, 9, 20; October 5.

*P. ochroterminana* (Kearfott): August 12, 16, 18(1947, 1972, 1973), 20, 21, 23(1950, 1959, 1963, 1969), 28, 29(1964, 1967, 1969), 30(1948, 1975); September 30.

*P. olivaceana* (Riley): June 15, 24, 28.

*P. ornatula* (Heinrich): July 28–31; August 3, 7, 10, 12, 13(1949, 1966, 1972, 1974), 14(1952, 1975), 15–17, 18(1936, 1961, 1965, 1973, 1974), 20, 22; September 1.

*P. parmatana* (Clemens): May 24, 29, 30; June 3, 6, 29; July 7, 29; August 6, 12, 13, 15(1965, 1973), 18, 21, 22(1944, 1976), 23, 26(1961, 1969, 1970, 1974), 27(1970, 1974), 28, 29(1953, 1962, 1967), 31(1964, 1967).

*P. raracana* (Kearfott): July 26, 29; August 8(1940, 1963), 9, 10, 15, 16, 17(1965, 1968), 18, 22, 27, 31.

*P. striatana* (Clemens): May 14(1963, 1964), 15, 18, 20, 22, 24, 26, 30; June 2(1940, 1966, 1967), 3, 7, 9, 10, 15, 22, 24, 28–30; July 4.

*P. tomonana* (Kearfott): August 21, 22, 25, 26(1970, 1974), 27(1944, 1961, 1962), 28(1973, 1976), 29(1964, 1969, 1971), 30, 31(1946, 1970). September 1–3, 5(1944, 1964, 1968), 10.

*P. umbrastriana* (Kearfott): April 20, 30; May 7, 8(1949, 1963), 9, 12–16, 18, 19(1951, 1975), 20(1939, 1949), 22–25, 26(1933, 1936, 1966), 28(1942, 1944), 30, 31; June 2, 3(1949, 1960), 10, 19; July 21; August 31.

*P. verna* Miller: April 25(1964, 1966); May 3, 9.

#### PLATYNOTA Clemens

*P. exasperatana* (Zeller): June 4, 10, 17, 27, 30; July 1(1963, 1967, 1970), 9, 10(1961, 1966), 11, 12(1959, 1972), 13, 15(1964, 1967), 16; August 11, 12, 25.

*P. flavedana* Clemens: June 1, 5, 17, 21, 22; July 21, 22, 31; August 3, 4, 13, 17(1964, 1968), 20, 28, 30; September 2.

*P. idaeusalis* (Walker): May 16, 21, 26, 31; June 1, 4, 8, 15; July 31; August 3, 4, 9(1964, 1965), 10(1963, 1976), 13, 15, 20, 21, 27; September 1. Reared: Wild grape [*Vitis* sp.]; issued June 10, 23.

#### PROTEOTERAS Riley

*P. aesculana* Riley: April 13, 15, 17, 20(1946, 1957), 24(1948, 1952, 1966), 26, 27, 29; May 1, 3; June 1, 13, 24(1949, 1966), 25, 30; July 7, 11, 13, 19, 23, 28; August 13, 24; September 30.

*P. crescentana* Kearfott: May 25; June 2, 4, 6–13, 15, 17, 21, 22, 25, 26, 29; July 1, 2.

*P. moffatiana* Fernald: May 17; June 18, 22, 28; July 5, 7, 12(1952, 1963), 13, 31; August 2, 8, 11. Reared: Sugar maple [*Acer saccharum* Marsh.]; issued July 14. Wild rose [*Rosa* sp.]; issued June 30. Elderberry [*Sambucus* sp.]; issued July 9.

*P. naracana* Kearfott: May 23, 30(1948, 1963); June 2(1942, 1944), 3, 6, 9, 10, 12(1940, 1973), 13, 20. Reared: Maple [*Acer* sp.]; issued May 27.

*P. willingana* (Kearfott): June 7, 10, 11, 15, 23, 25, 28; July 7. Reared: *Acer negundo* L. (borer in new shoots); issued June 28, 30.

#### PSEUDEXENTERA Heinrich

*P. cressoniana* (Clemens): March 24, 25, 28, 31; April 3–5, 12–14, 16(1963, 1967), 18, 21, 23–27; May 4.

*P. faracana* (Kearfott): March 17, 23, 24, 31; April 2, 4, 10, 15, 16(1963, 1967), 20, 23(1939, 1962), 24, 28.

*P. hodsoni* Miller: April 13, 16.

*P. mali* Freeman: March 28, 30; April 8, 12(1958, 1970), 13, 16(1963, 1971), 18, 20, 24 (on trunk of crab apple, *Malus* sp. [*coronaria* (L.) Mill.]), 25(1962, 1964), 26, 28; May 5.

*P. maracana* (Kearfott): March 28; April 12, 14, 16, 23, 29; May 1.

*P. sepiia* Miller: March 18, 22, 24, 25, 28–31; April 4, 13, 14(1939, 1956), 16, 18; May 11.

*P. spoliata* (Clemens): April 16, 20, 21, 28.

*P. virginiana* (Clemens): March 15, 24, 31; April 4, 6, 9, 12, 21, 24, 28.

#### PSEUDOGALLERIA Ragonot

*P. inimicella* (Zeller): May 20, 24; June 2, 3, 7(1966, 1972), 9, 10, 13, 15, 17, 18, 22, 26, 28; July 12, 23.

#### PSEUDOSCIAPHILA Obratzsov

*P. duplex* (Walsingham): May 25; June 1, 9, 16, 17, 20, 30. Reared: *Populus tremuloides* Michx. (larva in rolled leaf); issued June 5.

#### PTYCHOLOMA Stephens

*P. peritana* (Clemens): May 16, 18(1938, 1964), 30; June 1, 6, 12; July 29, 31; August 3, 8(1964, 1967), 18, 25; September 5, 6.

#### SEREDA Heinrich

*S. tautana* (Clemens): March 30; April 2(1956, 1963), 4, 6(1941, 1949, 1967), 16, 21(1940, 1964, 1968), 23(1939, 1962), 25, 26, 28(1940, 1970); May 2, 3(1939, 1965), 4, 26.

#### SONIA Heinrich

*S. constrictana* (Zeller): June 10, 17, 18, 23, 27, 30; July 2, 3, 7, 8, 11, 12, 20, 22, 24, 26, 31; August 10, 12.

*S. paraplesiana* Blanchard: July 2.

#### SPARGANOTHIS Hübner

*S. albicaudana* Busck: June 11, 15, 18, 24; July 12.

*S. diluticostana* (Walsingham): June 15, 17, 21–23, 26(1967, 1976), 28, 29(1946, 1956, 1961); July 6, 10, 15, 17, 20, 22(1960, 1969), 23, 24, 26–28; August 6, 14.

*S. flavibasana* (Fernald): June 7, 11(1942, 1944), 12, 21, 22, 24, 29. Reared: *Lonicera* sp., possibly *prolifera* (Kirchn.) Rehd. [labeled "*Lonicera (sullivanti)*"]; issued June 8, 18(1942, 1960), 23. *Lonicera* sp.; issued June 10, 28.

*S. niveana* (Walsingham): June 4, 10, 12, 13, 18, 24, 28, 30.

*S. pettitana* (Robinson): May 10; June 4, 9, 12, 15(1939, 1944, 1973, 1974), 16(1933, 1940), 22, 23, 30; July 9. Reared: Oak [*Quercus* sp.]; issued June 29.



*S. pulcherrimana* (Walsingham): June 2, 5, 10, 11, 12(1953, 1965), 14(1964, 1973), 15(1952, 1966), 17–19, 24.

*S. reticulatana* (Clemens): June 27; July 4, 7, 8, 24, 28; August 5, 7, 12, 20. Reared: Hazel [*Corylus* sp.]; issued June 28. Wild grape [*Vitis* sp.]; issued July 5.

*S. sulfureana* (Clemens): June 6; July 27; September 3, 12, 20; October 4, 20. Reared: *Comandra umbellata* (L.) Nutt.; issued June 15. Wild strawberry [*Fragaria* sp.]; issued June 21. *Helianthus* sp. (flowers); issued August 25. *Hypericum* sp.; issued June 28; August 12. Horsemint [*Mentha* sp.] (blossoms); issued July 22. *Penstemon* sp.; issued June 4, 21.

*S. testulana* (Zeller): June 5, 7, 8, 11, 15–17, 18(1944, 1960, 1968, 1972, 1975), 19, 20(1956, 1968, 1969), 21, 22, 24–26, 28–30; July 1, 4, 7–9, 12. Reared: *Cercis canadensis* L.; issued June 20(1954, 1956), 21, 29.

*S. xanthoides* (Walker): June 15, 17, 21(1949, 1961), 23, 25, 28, 29, 30(1953, 1961); July 1, 5.

#### ***SPILONOTA* Stephens**

*S. ocellana* (Denis & Schiffermüller): June 4–6, 9(1956, 1970), 10, 12, 14, 15, 18; July 13.

#### ***SULEIMA* Heinrich**

*S. cinerodorsana* Heinrich: August 6, 7, 9(1970, 1973), 10(1943, 1962), 14(1959, 1965–1967, 1969), 15(1965, 1969, 1974, 1975), 16, 17(1966, 1969), 18(1962, 1969), 21, 22(1965, 1976), 27.

*S. helianthana* (Riley): July 6, 8, 10, 12(1959, 1965), 15, 16(1963, 1964, 1966), 17, 21, 23–25, 27–29, 30(1962, 1963); August 9, 15.

#### ***TALPONIA* Heinrich**

*T. plummeriana* (Busck): June 18, 24, 28, 30.

#### ***XENOTEMNA* Powell**

*X. pallorana* (Robinson): June 12; July 1; September 3, 20. Reared: *Aster* sp.; issued June 3. *Comandra umbellata* (L.) Nutt.; issued June 7.

#### ***ZEIRAPHERA* Treitschke**

*Z. improbana* (Walker): March 20, 24, 28(1963, 1968), 29–31; April 2, 8, 9, 12, 13(1956, 1958), 16(1964, 1971), 17, 21, 24, 25(1940, 1957, 1962), 26, 28.

## **36. YPONOMEUTIDAE**

### ***ATTEVA* Walker**

*A. punctella* (Cramer): April 26, 27; May 4, 12; June 3; July 9; August 10, 12. Reared: *Ailanthus altissima* (Mill.) Swingle [labeled "*Ailanthus glandulosa*"]; issued July 22.

### ***LACTURA* Walker**

*L. pupula* (Hübner): July 26; August 8, 10.

### ***SWAMMERDAMIA* Hübner**

*S. caesiella* (Hübner): May 14, 15(1962, 1964), 17, 19, 26, 28, 29(1974, 1975), 31; June 1–4, 6; July 15, 20, 22, 23(1963, 1966), 25(1964, 1974), 26, 27; August 1, 8, 14(1965, 1967).

### ***YPONOMEUTA* Latreille**

*Y. atomocella* Dyar: May 23, 31; June 5–7, 12, 14–16, 27. Reared: *Ptelea trifoliata* L. (borer in new shoots); issued May 28, 31; June 10, 11, 27.

*Y. multipunctella* Clemens: June 16, 22, 23, 29; July 2–4. Reared: *Euonymus atropurpureus* Jacq.; issued June 15, 25.

### ***ZELLERIA* Stainton**

*Z. celastrusella* Kearfott: June 2, 3, 4(1963, 1973), 5, 6(1953, 1968), 7(1959, 1962, 1972), 8, 10–16, 22, 23; July 4.

## **37. ZYGAENIDAE**

### ***ACOLOITHUS* Clemens**

*A. falsarius* Clemens: June 4, 6; August 25.

### ***HARRISINA* Packard**

*H. americana* (Guérin): June 24, 27; July 1, 8(1934, 1964).

# Index of Larval Hosts

Numbers in parentheses refer to the moth families listed alphabetically in the checklist.

## ***Acer negundo* L.**

- Acleris negundana* (35)
- Adoxophyes negundana* (35)
- Chionodes negundella* (14)
- Proteoteras willingana* (borer in new shoots) (35)

## ***Acer saccharinum* L.**

- Acleris semiannula* (leaf folder) (35)
- Cameraria aceriella* (16)
- Phyllonorycter lucidicostella* (leaf miner) (16)

## ***Acer saccharum* Marsh.**

- Acleris chalybeana* (35)
- Caloptilia packardella* (16)
- Olethreutes appendicea* (35)
- Phyllonorycter clemensella* (leaf miner) (16)
- P. lucidicostella* (16)
- Proteoteras moffatiana* (35)
- Tetralopha asperatella* (29)

## ***Acer* sp.**

- Agonopterix nigrinotella* (24)
- Olethreutes nigrana* (35)
- Proteoteras narcana* (35)

## ***Agastache nepetoides* (L.) Kuntze**

- Pyrausta orphisalis* (29)

## ***Agrimonia* sp.**

- Anacamptis agrimoniella* (14)

## **Agrimony (see *Agrimonia*)**

## ***Ailanthus altissima* (Mill.) Swingle**

- Atteva punctella* (36)

## ***Ambrosia trifida* L.**

- Cremastobombycia ambrosiella* (16)
- Episimus argutanus* (35)
- Tischeria heliopsisella* (leaf miner) (34)

## ***Amorpha canescens* Pursh**

- Grapholita eclipsana* (35)
- Hystriophora taleana* (35)
- Meroptera cviatella* (29)
- Tetralopha baptisiella* (29)

## ***Amorpha fruticosa* L.**

- Agonopterix argillacea* (24)
- A. dimorphella* (24)
- Archips argyrospila* (35)
- Choristoneura rosaceana* (35)
- Hystriophora taleana* (35)
- Nephoterix dammersi* (29)
- Pandemis limitata* (35)
- Phyllonorycter uhlerella* (leaf miner) (16)
- Tetralopha baptisiella* (29)
- Walshia amorphella* (twig and stem galls) (9)

## ***Amphicarpa bracteata* (L.) Fern.**

- Brenthia pavonacella* (6)
- Leucanthiza amphicarpeae-foliella* (16)
- Phyllonorycter morrisella* (leaf miner) (16)

## ***Antennaria plantaginifolia* (L.) Hook.**

- Agonopterix nebulosa* (24)
- Herpetogramma pertextalis* (29)

## ***Antennaria* sp.**

- Agonopterix nebulosa* (leaves) (24)

## ***Apocynum androsaemifolium* L.**

- Saucrobotys futilalis* (social web) (29)

## **Apple (see *Malus*)**

## **Apple, crab (see *Malus coronaria*)**

## ***Arctium lappa* L.**

- Metzneria lappella* (seed) (14)

## ***Asimina triloba* (L.) Dunal**

- Parasa indeterminata* (20)

## ***Aster* sp.**

- Coleophora sparsipuncta* (8)
- Dichomeris nonstrigella* (14)
- D. ochripalpella* (14)
- Endopiza vernoniana* (35)
- Herpetogramma pertextalis* (29)
- Oidaematophorus homodactylus* (28)
- Scythris matutella* (30)
- Tischeria heliopsisella* (leaf miner) (34)
- T. solidagonifoliella* (leaf miner) (34)
- Xenotemna pallorana* (35)

## ***Aster* spp.**

- Gnorimoschema gibsoniella* (stem galls) (14)

## ***Baptisia leucantha* T. & G.**

- Anacamptis lupinella* (14)

## ***Bidens* sp.**

- Epiblema otiosana* (stem borer) (35)

## **Blackberry (see *Rubus*)**

## ***Blephilia hirsuta* (Pursh) Benth.**

- Pyrausta orphisalis* (29)

## ***Boehmeria cylindrica* (L.) Sw.**

- Pleuroptya silicalis* (leaf roller) (29)

## ***Boehmeria cylindrica* (L.) Sw. (?)**

- Pandemis lamprosana* (35)

## ***Boltonia asteroides* (L.) L'Hér.**

- Agonopterix pulvipennella* (24)

## **Boneset (see *Eupatorium perfoliatum*)**

## **Box elder (see *Acer negundo*)**

## **Burdock (see *Arctium lappa*)**

## ***Carya cordiformis* (Wangenh.) K. Koch**

- Acrobasis kearfottella* (case on leaf) (29)

## ***Carya glabra* (Mill.) Sweet**

- Acrobasis caryae* (29)



***Carya ovata* (Mill.) K. Koch**

- Acrobasis caryae* (in new shoots) (29)
- A. stigmella* (in buds) (29)
- Cameraria caryaefoliella* (16)

***Carya* sp.**

- Acrobasis demotella* (29)
- A. feltella* (29)
- A. kearfottella* (29)
- A. peplifera* (29)
- Argyrotaenia juglandana* (35)
- Cameraria caryaefoliella* (16)
- Coleophora concolorella* (8)
- C. laticornella* (case on leaf) (8)
- Gretchena bolliana* (35)
- Valentinia glandulella* (in *Curculio*-eaten nut) (4)

Cedar (see ***Juniperus***)***Ceanothus americanus* L.**

- Agonopterix nigrinotella* (24)

***Celtis occidentalis* L.**

- Nephoterix celtidella* (29)
- Phyllonorycter celtifoliella* (leaf miner) (16)

***Cephalanthus occidentalis* L.**

- Mompha cephalonthiella* (partial leaf miner) (22)

***Cercis canadensis* L.**

- Sparganothis testulana* (35)

***Chelone glabra* L.**

- Hysterosia viscana* (flowers and seeds) (7)

Cherry, wild (see ***Prunus***)***Cicuta maculata* L.**

- Depressaria cinereocostella* (flowers) (24)

***Cirsium vulgare* (Savi) Tenore**

- Lobesia carduana* (35)

***Cirsium* sp.**

- Lobesia carduana* (35)
- Platyptilia carduidactyla* (28)
- Scythris undescribed* sp. near *ochristriata* (30)

Clover, purple burr (see ***Petalostemum purpureum***)Clover, sweet (see ***Melilotus*** sp.)***Comandra umbellata* (L.) Nutt.**

- Choristoneura rosaceana* (35)
- Ochromolopis ramapoella* (12)
- Olethreutes comandrana* (35)
- Sparganothis sulfureana* (35)
- Xenotemna pallorana* (35)

Corn, sweet (see ***Zea***)***Cornus drummondii* Meyer**

- Caloptilia belfrageella* (leaf roller) (16)

***Cornus foemina* Mill.**

- Olethreutes connectus* (35)
- O. exaeresima* (35)

***Cornus racemosa* Lam.**

- Olethreutes exaeresima* (35)

***Cornus stolonifera* Michx.**

- Acleris cornana* (35)
- A. pychogrammos* (35)
- Olethreutes connectus* (35)

***Cornus* sp.**

- Acleris cornana* (leaf roller) (35)
- A. forbesana* (leaf roller) (35)
- Olethreutes exaeresima* (leaf roller) (35)

***Corylus americana* Walt.**

- Acrobasis coryliella* (29)
- A. secundella* (29)
- Anacamptis tristigella* (14)
- Ancylis burgessiana* (35)
- Cameraria corylisella* (leaf miner) (16)
- Coleophora albovanescentis* (8)
- Nites grotella* (24)
- N. ostryella* (24)
- Olethreutes appendicea* (35)
- O. corylana* (35)
- O. malana* (35)
- O. permundana* (35)
- O. tiliana* (35)
- Pandemis limitata* (35)
- Psilocorsis cryptolechiella* (24)

***Corylus* sp.**

- Dichomeris ligulella* (14)
- D. ventrella* (14)
- Epilotia walkerana* (in catkins) (35)
- Olethreutes appendicea* (35)
- Sparganothis reticulatana* (35)

Cottonwood (see ***Populus***)***Crataegus* sp.**

- Acrobasis indigenella* (29)
- Ancylis nubeculana* (35)
- Argyrotaenia quadrifasciana* (35)
- Choristoneura rosaceana* (35)
- Hedya chionosema* (35)
- Parornix crataegifoliella* (16)
- Tischeria malifoliella* (leaf miner) (34)

***Desmodium* sp.**

- Brenthia pavonacella* (6)
- Caloptilia violacella* (16)
- Stilbosis tesquella* (9)

Dewberry (see ***Rubus***)***Diospyros virginiana* L.**

- Eumaroza malachitana* (35)

Elderberry (see ***Sambucus***)***Euonymus atropurpureus* Jacq.**

- Pandemis limitata* (35)
- Yponomeuta multipunctella* (36)

***Eupatorium perfoliatum* L.**

- Endopiza slingerlandana* (35)
- Oidaematophorus elliotti* (28)
- O. lacteodactylus* (28)

- Eupatorium purpureum* L.**  
*Oidaematophorus eupatorii* (28)
- Eupatorium purpureum* L. (?)**  
*Agonopterix atrodorsella* (24)
- Eupatorium rugosum* Houtt.**  
*Dichrorampha leopardana* (35)
- Eupatorium* sp.**  
*Oidaematophorus eupatorii* (28)
- False indigo (see ***Amorpha fruticosa***)
- Four o'clock (see ***Mirabilis jalapa***)
- Foxglove, false (see ***Gerardia* sp.**)
- Fragaria virginiana* Duchesne**  
*Herpetogramma pertextalis* (29)
- Fragaria* sp.**  
*Olethreutes olivaceana* (35)  
*Sparganothis sulfureana* (35)
- Gerardia flava* L.**  
*Endothenia hebesana* (in seed pods) (35)
- Gerardia* sp.**  
*Stenoptilodes auriga* (28)
- Geum canadense* Jacq.**  
*Geina tenuidactyla* (28)
- Gleditsia* sp.**  
*Trascula reductella* (29)
- Goldenrod (see ***Solidago***)
- Gooseberry (see ***Ribes***)
- Grape, wild (see ***Vitis***)
- Hamamelis virginiana* L.**  
*Episimus argutanus* (in folded leaf) (35)
- Hazel (see ***Corylus***)
- Helianthus grosseserratus* Martens (?)**  
*Tischeria heliopsisella* (leaf miner) (34)
- Helianthus* sp.**  
*Sparganothis sulfureana* (flowers) (35)  
*Tischeria heliopsisella* (leaf miner) (34)
- Heliopsis* sp.**  
*Tischeria heliopsisella* (leaf miner) (34)
- Hickory (see ***Carya***)
- Horsemint (see ***Mentha***)
- Hypericum punctatum* Lam. var. *pseudomaculatum* (Bush)**  
 Fern.  
*Agonopterix lythrella* (24)
- Hypericum* sp.**  
*Sparganothis sulfureana* (35)
- Ipomoea purpurea* (L.) Roth**  
*Bedellia somnulentella* (21)  
*Emmelina monodactyla* (28)
- Ipomoea* spp.**  
*Cosmopterix bendidia* (9)
- Juglans cinerea* L.**  
*Acrobasis angusella* (in shoots) (29)
- Juglans nigra* L.**  
*Argyrotaenia juglandana* (35)
- Juglans* sp.**  
*Acrobasis angusella* (in shoots) (29)  
*A. juglandis* (leaves) (29)  
*A. latifasciella* (29)  
*Argyrotaenia juglandana* (35)  
*Dichomeris ventrella* (14)  
*Gretchena bolliana* (35)
- Juniperus* sp.**  
*Coleotechnites thujaella* (borer in apple galls) (14)  
*Periploca cata* (borer in apple galls) (9)
- Locust, black (see ***Robinia pseudo-acacia***)
- Lonicera* sp.**  
*Phyllonorycter fragilella* (leaf miner) (16)  
*Sparganothis flavibasana* (35)
- Loosestrife (see ***Lysimachia***)
- Lycopus americanus* Muhl.**  
*Dysodia oculatana* (32)  
*Meroptera cviatella* (29)
- Lysimachia* sp.**  
*Aterpia approximana* (35)
- Malus coronaria* (L.) Mill.**  
*Pseudexentera mali* (35)  
*Psorosina hammondi* (29)
- Malus pumila* Mill.**  
*Phyllonorycter malimalifoliella* (leaf miner) (16)
- Malus* sp.**  
*Phyllonorycter crataegella* (leaf miner) (16)
- Maple (see ***Acer***)
- Maple, hard, sugar (see ***Acer saccharum***)
- Maple, soft (see ***Acer saccharinum***)
- Melilotus* sp.**  
*Paractopa occulata* (leaf miner) (16)
- Mentha* sp.**  
*Sparganothis sulfureana* (blossoms) (35)
- Mirabilis jalapa* L.**  
*Heliodines nyctaginella* (17)
- Mirabilis* sp.**  
*Heliodines nyctaginella* (17)
- Monarda fistulosa* L.**  
*Coleophora monardella* (8)
- Monotropa uniflora* L.**  
*Endopiza monotropana* (flowers) (35)
- Nelumbo lutea* (Willd.) Pers.**  
*Ostrinia penitalis* (stem borer) (29)
- Nettle (see ***Boehmeria cylindrica*** and ***Urtica***)
- Oak (see ***Quercus***)



Oak, black (see *Quercus velutina*)

Oak, burr (see *Quercus macrocarpa*)

Oak, red (see *Quercus rubra*)

Oak, white (see *Quercus alba*)

***Oenothera biennis* L.**

*Mompha brevivittella* (seed pod) (22)

*M. circumscriptella* (seed capsule) (22)

***Oenothera* sp.**

*Hysterosia oenotherana* (terminal leaves) (7)

*Mompha brevivittella* (seed capsule) (22)

*M. circumscriptella* (seed capsule) (22)

***Ostrya virginiana* (Mill.) K. Koch**

*Acrobasis sylviella* (29)

*Ancylis laciniana* (35)

*Cameraria ostryarella* (leaf miner) (16)

*Nites ostryella* (24)

*Phyllonorycter obscuricostella* (leaf miner) (16)

*P. ostryaefoliella* (leaf miner) (16)

***Parthenocissus quinquefolia* (L.) Planch.**

*Desmia funeralis* (29)

***Penstemon* sp.**

*Endothenia hebesana* (in seed pod) (35)

*Hysterosia lavana* (in seed pods) (7)

*Sparganothis sulfureana* (35)

Persimmon (see *Diospyros virginiana*)

***Petalostemum purpureum* (Vent.) Rydb.**

*Hystrichophora taleana* (35)

***Physocarpus opulifolius* (L.) Maxim.**

*Ancylis spiraeifolia* (35)

***Picea* sp.**

*Endothenia albolineana* (35)

***Platanus occidentalis* L.**

*Tetralopha militella* (29)

***Polemonium reptans* L.**

*Coleophora polemoniella* (8)

***Polygonum* sp.**

*Monochroa absconditella* (14)

*Ostrinia obumbratalis* (stem borer) (29)

***Populus deltoides* Marsh.**

*Framinghamia helvalis* (29)

*Meroptera cviatella* (in buds and new shoots) (29)

***Populus tremuloides* Michx.**

*Anacamptis innocuella* (14)

*Batrachedra praeangusta* (8)

*Dichomeris ligulella* (14)

*Gypsonoma haimbachiana* (35)

*Pseudosciaphila duplex* (leaf roller) (35)

***Prenanthes alba* L.**

*Phyllocnistis insignis* (leaf miner) (16)

***Prenanthes* sp.**

*Endopiza rhoifructana* (in flowers) (35)

*Phyllocnistis insignis* (16)

***Prunus serotina* Ehrh.**

*Ancylis burgessiana* (35)

*Argyrotaenia velutinana* (35)

*Coleophora malivorella* (8)

*Filatima serotinella* (14)

*Parornix crataegifoliella* (16)

*Phyllonorycter propinquinella* (leaf miner) (16)

***Prunus virginiana* L.**

*Acleris schalleriana* (35)

*Olethreutes inornatana* (35)

*O. quadrifidus* (35)

*O. viburnana* (35)

***Prunus* sp.**

*Olethreutes inornatana* (35)

***Psoralea tenuiflora* Pursh**

*Syncopacma palpilineella* (14)

***Ptelea trifoliata* L.**

*Agonopterix nigrinotella* (24)

*A. pteleae* (24)

*Yponomeuta atomocella* (new shoot borer) (36)

***Quercus alba* L.**

*Acleris tripunctana* (35)

*Ancylis laciniana* (35)

*Archips semiferrana* (35)

*Arogalea cristifasciella* (14)

*Cameraria australisella* (leaf miner) (16)

*C. cincinnatiella* (leaf miner) (16)

*C. hamadryadella* (leaf miner) (16)

*C. ulmella* (leaf miner) (16)

*Phyllonorycter argentifimbriella* (leaf miner) (16)

*P. basistrigella* (leaf miner) (16)

*P. fitchella* (leaf miner) (16)

*P. lucidicostella* (16)

*P. quercialbella* (leaf miner) (16)

*Tischeria badiella* (leaf miner) (34)

*T. citrinipennella* (leaf miner) (34)

*T. purinosella* (leaf miner) (34)

*T. quercitella* (leaf miner) (34)

*T. zelleriella* (leaf miner) (34)

***Quercus imbricaria* Michx.**

*Cameraria australisella* (leaf miner) (16)

*C. bethunella* (leaf miner) (16)

*Phyllonorycter aeriferella* (leaf miner) (16)

*P. rileyella* (16)

*Tischeria citrinipennella* (leaf miner) (34)

*T. quercitella* (34)

***Quercus macrocarpa* Michx.**

*Argyrotaenia alisellana* (35)

*Cameraria bethunella* (16)

*C. hamadryadella* (16)

*Tischeria zelleriella* (34)

***Quercus muehlenbergii* Engelm.**

*Phyllonorycter aeriferella* (16)

***Quercus rubra* L.**

*Coleophora querciella* (8)

*Dichomeris georgiella* (14)

***Quercus velutina* Lam.**

- Argyrotaenia alisellana* (35)
- A. quercifolia* (35)
- Croesia semipurpurana* (35)
- Dichomeris ligulella* (new shoots) (14)
- Phyllonorycter aeriferella* (16)
- Tischeria quercitella* (leaf miner) (34)

***Quercus* sp.**

- Antaeotricha humilis* (24)
- A. osseella* (24)
- Argyrotaenia quercifolia* (35)
- Cameraria chambersella* (leaf miner) (16)
- Chionodes bicostomaculella* (14)
- Croesia albicomana* (35)
- C. semipurpurana* (35)
- Dichomeris ligulella* (apple galls) (14)
- Phyllonorycter lucidicostella* (16)
- P. quercialbella* (16)
- Psilocorsis quercicella* (24)
- Salebriaria engeli* (29)
- Sparganothis pettitana* (35)
- Telphusa latifasciella* (14)
- Tischeria citrinipennella* (34)
- T. quercitella* (34)
- T. zelleriella* (34)

***Ranunculus* sp.**

- Herpetogramma pertextalis* (29)

***Ratibida pinnata* (Vent.) Barnh.**

- Epiblema iowana* (in roots) (35)

***Rhus glabra* L.**

- Moodna ostrinella* (seed heads) (29)
- Olethreutes appendicea* (35)

***Rhus radicans* L.**

- Caloptilia rhoifoliella* (16)
- Cameraria guttifinitella* (leaf miner) (16)
- Epipaschia superatalis* (29)

***Rhus typhina* L.**

- Meroptera pravella* (29)
- Nephopterix subfuscella* (29)

***Rhus* sp.**

- Endopiza rhoifructana* (seed heads) (35)
- Episimus argutanus* (35)
- Holcocera chalcfrontella* (heads) (4)
- Symmetrischema lavernella* (seed heads) (14)

***Ribes* sp.**

- Olethreutes appendicea* (35)
- Zophodia convolutella* (in fruit) (29)

***Robinia pseudo-acacia* L.**

- Filatima pseudacaciella* (14)
- Nephopterix virgatella* (29)
- Phyllonorycter robinella* (leaf miner) (16)
- Sinoe robinella* (14)

***Robinia* sp.**

- Chrysaster ostensackenella* (leaf miner) (16)
- Ecdyolopha insiticiana* (twig gall) (35)

***Rosa* sp.**

- Cnaemidophorus rhododactylus* (leaves) (28)
- Proteoteras moffatiana* (35)

***Rosa* spp.**

- Croesia albicomana* (leaf roller) (35)

**Roses (see *Rosa*)****Roses, wild (see *Rosa*)*****Rubus occidentalis* L.**

- Tischeria aenea* (34)

***Rubus* sp.**

- Geina tenuidactyla* (28)
- Olethreutes exoletus* (35)
- O. melanomesa* (35)

***Rudbeckia laciniata* L.**

- Epiblema carolinana* (in roots) (35)
- E. tandana* (in roots) (35)
- Hysterosia birdana* (root borer) (7)

***Rudbeckia* sp.**

- Endopiza rhoifructana* (seed heads) (35)

***Salix* sp.**

- Agonopterix argillacea* (24)
- Batrachedra illusor* (dead stems) (8)
- Caloptilia stigmatella* (leaf folder) (16)
- Machimia tentoriferella* (leaf folder) (24)
- Meroptera pravella* (29)
- Micrurapteryx salicifoliella* (leaf miner) (16)
- Pandemis limitata* (35)
- Phyllonorycter salicifoliella* (leaf miner) (16)
- P. scudderella* (leaf miner) (16)

***Salix* spp.**

- Batrachedra salicipomonella* (galls) (8)

***Sambucus canadensis* L.**

- Endopiza sambuci* (35)

***Sambucus* sp.**

- Endopiza sambuci* (35)
- Proteoteras moffatiana* (35)

***Sanicula canadensis* L.**

- Herpetogramma pertextalis* (29)

***Scutellaria lateriflora* L.**

- Endothenia hebesana* (stem borer) (35)
- Prochoreutis inflatella* (6)

***Scutellaria* sp.**

- Endothenia hebesana* (stem borer) (35)

***Silphium perfoliatum* L.**

- Eucosma giganteana* (35)

***Sium suave* Walt.**

- Depressaria cinereocostella* (24)
- Thyralia bunteana* (7)

**Skullcap (see *Scutellaria*)****Smartweed (see *Polygonum*)*****Smilax rotundifolia* L.**

- Thyris sepulchralis* (32)



**Smilax** sp.*Proleucoptera smilaciella* (leaf miner) (21)**Solidago altissima** L.*Gnorimoschema gallaesolidaginis* (stem galls) (14)**Solidago canadensis** L.*Epiblema scudderiana* (stem galls) (35)*Gnorimoschema gallaesolidaginis* (stem galls) (14)*Oidaematophorus glenni* (root borer) (28)*O. homodactylus* (28)**Solidago flexicaulis** L.*Gnorimoschema gallaeasterella* (stem galls) (14)**Solidago gigantea** Ait.*Agonopterix pulvipennella* (24)*Coleophora sparsipuncta* (8)*Gnorimoschema gallaesolidaginis* (stem galls) (14)**Solidago latifolia** L.*Tischeria solidagonifoliella* (34)**Solidago rigida** L.*Tebenna carduiella* (6)**Solidago** sp.*Choristoneura rosaceana* (35)*Dichomeris inserrata* (14)*D. juncidella* (leaf roller) (14)*D. ligulella* (14)*D. ochripalpella* (14)*Oidaematophorus cretictactylus* (28)*O. glenni* (root borer) (28)*O. homodactylus* (28)*Trichoptilus lobidactylus* (28)**Solidago** spp.*Gnorimoschema gallaesolidaginis* (stem galls) (14)**Spiraea** × **vanhouttei** (Briol) Zabel*Evora hemidesma* (35)Spruce (see **Picea**)Strawberry (see **Fragaria**)Strawberry, wild (see **Fragaria**)Sumac (see **Rhus**)Sycamore (see **Platanus occidentalis**)**Taenidia integerrima** (L.) Drude*Agonopterix flavicomella* (leaf roller) (24)**Teucrium canadense** L.*Endothenia hebesana* (stem borer) (35)*E. nubilana* (root borer) (35)*Pyrausta orphisalis* (29)Thistle (see **Cirsium**)**Tilia americana** L.*Coleophora tiliaefoliella* (8)*Olethreutes tiliana* (35)*Phyllonorycter lucetiella* (leaf miner) (16)Turtlehead (see **Chelone glabra**)**Ulmus** sp.*Cameraria ulmella* (16)*Phyllonorycter argentinotella* (leaf miner) (16)**Urtica** sp.*Herpetogramma pertextalis* (29)**Urtica** sp. (?)*Pandemis lamprosana* (35)**Verbesina alternifolia** (L.) Britt.*Agonopterix eupatoriella* (24)*Cremastobombycia ignota* (leaf miner) (16)*Dysodia oculatana* (32)*Hysterosia terminana* (root borer) (7)**Vernonia missurica** Raf.*Coleophora vernoniaeella* (8)*Dichomeris washingtoniella* (14)*Oidaematophorus paleaceus* (28)**Vernonia** sp.*Coleophora vernoniaeella* (casebearer) (8)**Veronicastrum virginicum** (L.) Farw.*Coleophora spissicornis* (8)*Herpetogramma pertextalis* (29)**Viburnum prunifolium** L.*Acleris schalleriana* (35)**Viburnum** sp.*Anacamptis rhoifrutella* (14)**Vitis** sp.*Geina periscelidactyla* (28)*Platynota idaeusalis* (35)*Sparganothis reticulatana* (35)Walnut (see **Juglans** spp.)Walnut, black (see **Juglans nigra**)Willow (see **Salix**)**Xanthoxylum americanum** Mill.*Agonopterix nigrinotella* (24)**Zea mays** L.*Plodia interpunctella* (dried seed) (29)

## Literature Cited

- Brown, R.L., and W.E. Miller. 1983. Valid names of the spruce seed moth and a related *Cydia* species (Lepidoptera: Tortricidae). *Annals of the Entomological Society of America* 76:110–111.
- Cashatt, E.D. 1972. Notes on the *Balanotes* (Meyrick) group of *Oidaematophorus* Wallengren with description of a new species (Pterophoridae). *Journal of the Lepidopterists' Society* 26:1–13.
- Clarke, J.F.G. 1941. Revision of the North American moths of the family Oecophoridae, with descriptions of new genera and species. *Proceedings of the United States National Museum* 90:33–286, 48 pls.
- Clarke, J.F.G. 1947. A new *Dichomeris* from eastern United States (Lepidoptera, Gelechiidae). *Proceedings of the Entomological Society of Washington* 49:187–189.
- Clarke, J.F.G. 1952. Host relationships of moths of the genera *Depressaria* and *Agonopterix*, with descriptions of new species. *Smithsonian Miscellaneous Collections* 117(7):1–20 + 6 pls.
- Clarke, J.F.G. 1953. New species of Olethreutidae from Illinois (Lepidoptera). *Journal of the Washington Academy of Sciences* 43:226–231.
- Fernald, M.L. 1950. Gray's manual of botany, 8th edition. American Book Company, Chicago. 1632 p.
- Forbes, W.T.M. 1923. The Lepidoptera of New York and neighboring states. Primitive forms, microlepidoptera, pyraloids, bombyces. Cornell University Agricultural Experiment Station Memoir 68. 729 p.
- Godfrey, G.L. 1978. The Murray O. Glenn collection of microlepidoptera. *Journal of the Lepidopterists' Society* 32:235.
- Hodges, R.W. 1962a. A review of the genus *Periploca* with descriptions of nine new species (Lepidoptera: Gelechioidea). *The Pan-Pacific Entomologist* 38:83–97.
- Hodges, R.W. 1962b. A revision of the Cosmopterigidae of America north of Mexico, with a definition of the Momphidae and Walshidae (Lepidoptera: Gelechioidea). *Entomologica Americana* 42(N.S.):1–166.
- Hodges, R.W. 1964. A review of the North American moths of the family Walshidae (Lepidoptera: Gelechioidea). *Proceedings of the United States National Museum* 115:289–329.
- Hodges, R.W. 1966. Review of New World species of *Batrachedra*, with description of three new genera (Lepidoptera: Gelechioidea). *Transactions of the American Entomological Society* 92:585–651 + pls. 29–53.
- Hodges, R.W. 1969. Nearctic Walshidae notes and new taxa (Lepidoptera: Gelechioidea). *Smithsonian Contributions to Zoology* 18. 30 p.
- Hodges, R.W. 1986. *Gelechioidea: Gelechiidae* (in part) *Dichomeriinae* in R.B. Dominick et al., ed. *The moths of America north of Mexico*, Fasc. 7.1. The Wedge Entomological Research Foundation. Washington, [D.C.]. 195 p.
- Hodges, R.W., T. Dominick, D.R. Davis, D.C. Ferguson, J.G. Franclemont, E.G. Munroe, and J.A. Powell, ed. 1983. Check list of the Lepidoptera of America north of Mexico. E.W. Classey Limited and The Wedge Entomological Research Foundation. London. 284 p.
- Irwin, R.R. 1983. Murray Otto Glenn (1893–1981). *Journal of the Lepidopterists' Society* 37:260–261.
- Irwin, R.R. 1985. RT&N: The Chicago & Alton's Granville branch. GM&O Historical News (Gulf, Mobile & Ohio Historical Society, Inc., Bedford Park, IL) 38:4–9.
- MacKay, M.R. 1959. Larvae of the North American Olethreutidae (Lepidoptera). *Canadian Entomologist, Supplement* 10. 338 p.
- MacKay, M.R. 1962. Larvae of the North American Tortricinae (Lepidoptera: Tortricidae). *Canadian Entomologist, Supplement* 28. 182 p.
- MacKay, M.R. 1968. The North American Aegeriidae (Lepidoptera): a revision based on late-instar larvae. *Memoirs of the Entomological Society of Canada* 58. 112 p.
- McDunnough, J. 1939. Check list of the Lepidoptera of Canada and the United States of America. Part 2. Microlepidoptera. *Memoirs of the Southern California Academy of Sciences* 2(1). 171 p.
- Miller, W.E. 1983a. Genus *Phaneta*: new synonymies and a new species (Lepidoptera: Tortricidae). *Annals of the Entomological Society of America* 76: 98–103.
- Miller, W.E. 1983b. Nearctic *Endothenia* species: a new synonymy, a misidentification, and a revised status (Lepidoptera: Tortricidae). *The Great Lakes Entomologist* 16: 5–12.
- Miller, W.E. 1985a. Nearctic *Eucosma* (Lepidoptera: Tortricidae): four new species and three new synonymies. *Annals of the Entomological Society of America* 78:240–247.
- Miller, W.E. 1985b. Nearctic *Epiblema*: a new synonymy, a revised identity, and two new species (Lepidoptera: Tortricidae). *The Great Lakes Entomologist* 18:33–38.
- Miller, W.E. 1987. The species of *Pseudexentera* (Tortricidae). *Journal of the Lepidopterists' Society* 40:218–237.
- Neunzig, H.H. 1972. Taxonomy of *Acrobasis* larvae and pupae in eastern North America. United States Department of Agriculture Technical Bulletin 1457. 158 p.
- Powell, J.A. 1980. Evolution of larval food preferences in microlepidoptera. *Annual Review of Entomology* 25:133–159.
- Schwegman, J.E., G.B. Fell, M. Hutchison, G. Paulson, W.M. Shepherd, and J. White. 1973. Comprehensive plan for the Illinois Nature Preserves System. Part 2. The natural divisions of Illinois. Illinois Nature Preserves Commission, Rockford. 32 p. + map.
- Wyatt, A.K. 1953. *Schinia jaguarina*—its food plant (Lepidoptera, Phalaenidae). *Bulletin of the Brooklyn Entomological Society* 48:70.





Illinois Natural History Survey  
Special Publication 7  
July 1987













UNIVERSITY OF ILLINOIS-URBANA

595.7809773G543M

C001

MICROLEPIDOPTERA FROM THE SANDY CREEK AN



3 0112 017635217